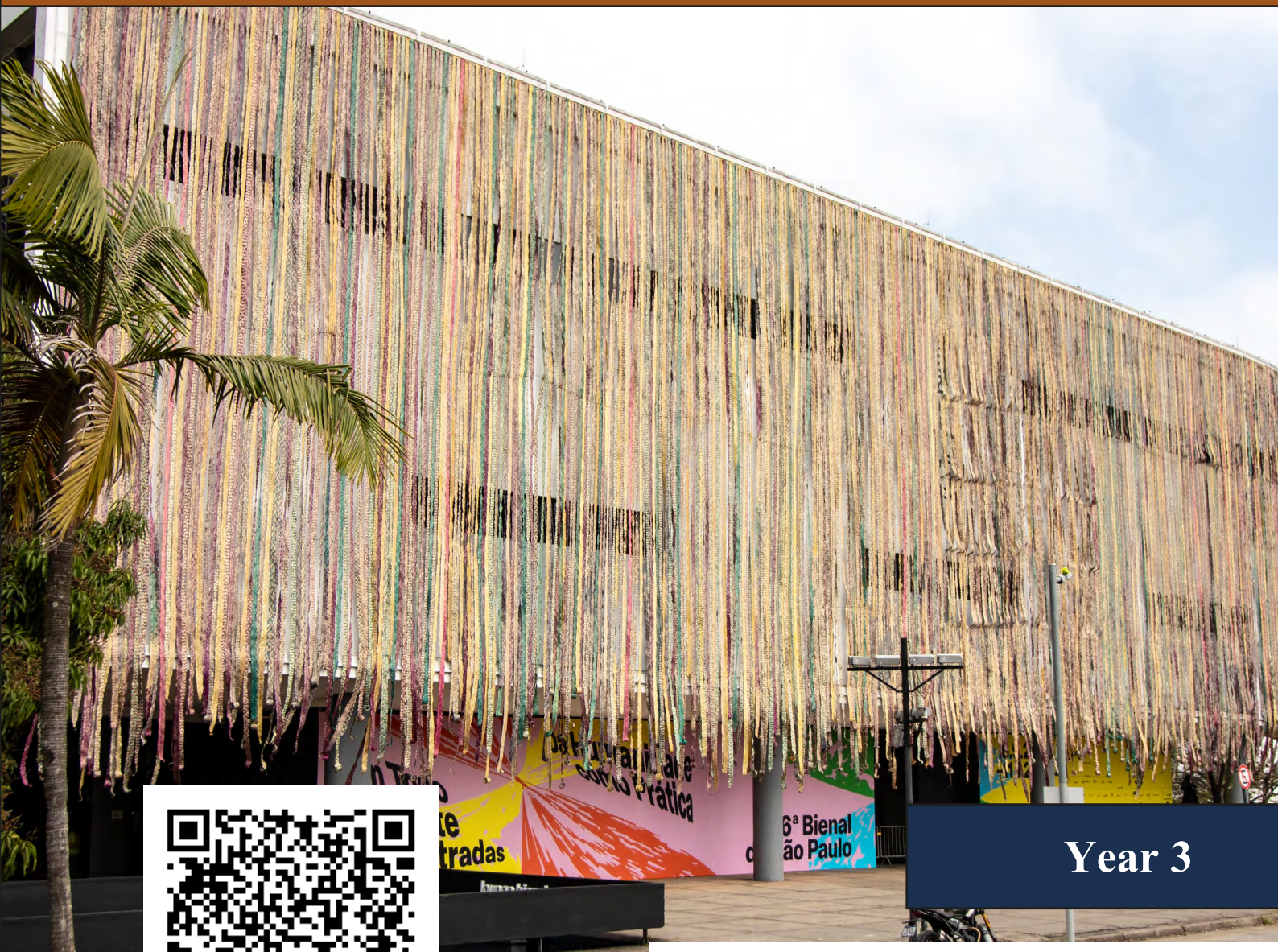
MINISTRY OF EDUCATION

ART AND DESIGN STUDIO for Senior High Schools

TEACHER MANUAL



Year 3

NATIONAL COUNCIL FOR CURRICULUM & ASSESSMENT OF MINISTRY OF EDUCATION

MINISTRY OF EDUCATION

REPUBLIC OF GHANA

Art and Design Studio

for Senior High Schools

Teacher Manual

Year Three

NATIONAL COUNCIL FOR
CURRICULUM & ASSESSMENT
OF MINISTRY OF EDUCATION

ART AND DESIGN STUDIO TEACHER MANUAL

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Introduction

The National Council for Curriculum and Assessment (NaCCA) has developed the third and final set of curriculum materials to support the implementation of the new Senior High School curriculum.

This Year Three Teacher Manual for Art and Design Studio covers all aspects of the content, pedagogy, teaching and learning resources, and assessment required to effectively support learners in their final year of Senior High School. It contains information for all 24 weeks, including the nine key assessments required for the Student Assessment Portal (SAP). All the necessary information for the SAP has been included in the Year Three Teacher Manual to simplify the development of weekly learning plans, meaning that teachers have a single reference document.

The Year Three Teacher Manual has two main objectives:

- To support learners to consolidate and deepen their understanding of the content, pedagogy, and assessment across all three years of the new Senior High School curriculum in preparation for the West Africa Senior Secondary Certificate Examination (WASSCE).
- To equip teachers with the tools and resources needed to deliver revision-focused, assessment-led lessons that build on the knowledge learners have acquired from Year One to Year Three.

In this third year, teachers will be supporting learners to prepare for the WASSCE. Each section of the Teacher Manual is therefore structured around the highest Depth of Knowledge (DoK) levels, allowing learners to build progressively on knowledge acquired from Year One to Year Three. For each week, learning tasks and pedagogy are built around the assessment, ensuring that classroom activities directly prepare learners for the demands of the examination. Two sets of sample examination papers are also provided — one administered at Week 10 as a first semester practice examination, and one at Week 20 as a mock examination — to gauge learners' competencies and identify areas requiring remediation.

To further support teachers in delivering Year Three, NaCCA, working with the Ghana Education Service, has developed a subject-specific App for each subject using the Playlab AI platform. These Ghanaian-owned Apps — the first of their kind at this scale in Africa — are directly linked to the revised curriculum and will assist teachers in:

- holding their weekly Professional Learning Community (PLC) sessions

- developing weekly learning plans and applying the learner-centred pedagogies and varied modes of assessment required for the new SHS curriculum
- incorporating differentiation, Social and Emotional Learning (SEL), and Gender Equality and Social Inclusion (GESI) into lessons

Information about how to use the Apps, including QR codes, is provided in the Year Three Subject-Specific PLC Handbooks.

The Year Three PLC sessions have been revised in response to findings from the 2025 annual evaluation survey. The survey confirmed that teachers have made strong progress in lesson planning, use of varied instructional methods, ICT integration, and modes of assessment. To address the identified gap in explaining concepts clearly using examples familiar to learners, each PLC session now includes a dedicated Content Exploration segment. This ten-minute segment brings the subject group together to work through one challenging problem or concept from the week's Teacher Manual content — not to plan how to teach it, but to ensure that every teacher in the group fully understands it. Each PLC session continues to include:

- Planning and Reviewing of Learning Plan (45 minutes) — using the subject-specific App to explore content, plan lessons, and prepare the week's key assessment
- Content Exploration (10 minutes) — collaborative group work on a challenging problem or concept from the week's content
- Enactment (30 minutes) — teaching an activity from the learning plan with structured peer observation and feedback
- Reflection (5 minutes) — sharing views on the session and identifying next steps

The PLC sessions in Year Three also place particular emphasis on connecting the week's content to equivalent topics taught in Years One and Two. Teachers are encouraged to note the recap weeks signposted throughout the Teacher Manual and to use the App to explore how content across all three years links together.

As in previous years, teachers are expected to integrate National Values, Gender Equality and Social Inclusion (GESI), Social and Emotional Learning (SEL), and 21st-century skills into their learning activities, assessment tasks, and rubrics and mark schemes. The subject-specific App will support teachers in doing this throughout the year.

NaCCA acknowledges the dedication of the teachers who have implemented the new curriculum across Years One and Two and recognises that Year Three represents both the culmination of that effort and a critical moment for learners. The Year Three Teacher Manual and its accompanying resources have been developed to ensure that every learner — regardless of background, ability, or school context — is fully prepared to demonstrate what they know and can do in the WASSCE and to progress confidently to further studies, the world of work, and adult life.

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SECTION 1: ART BUSINESS REGISTRATION POLICIES AND LAWS

Strand: Art and Design Theories and Application

Sub-Strand: Meanings, Scope and Role of Art and Design Studio

Learning Outcome: *Reflect and familiarise on intellectual property laws in Ghana and its importance to the art and design studio practitioners*

Content Standard: Demonstrate knowledge and understanding of the Creative Art industry laws and ethics, and their implication on art and design studio practices.

INTRODUCTION AND SECTION SUMMARY

This section outlines how Ghana's legal framework supports and protects artists and their creative endeavours through four key laws: Copyright Act of Ghana, 2005 (Act 690), Patent Act, 2003 (Act 657), Trademarks Act, 2004 (Act 664), Company Act, 2019 (Act 992). These laws enable artists to assert ownership over their work, prevent unauthorised use, and build legitimate art-based businesses. The Copyright Act shields original works such as paintings, sculptures, and designs from unauthorised reproduction, while the Patent Act safeguards innovative artistic processes and inventions. The Trademarks Act and the Company Act play crucial roles in branding and formalising art enterprises. A major focus is placed on the importance of registering an art business. Registration provides artists with benefits such as access to loans, formal contracts, and broader markets-opportunities typically unavailable to unregistered individuals and organisations. Additionally, the section explores the ethical responsibilities of professional artists, showing the need for cultural sensitivity, environmental consideration, and respect for the intellectual property of others. By mastering these legal and ethical principles, artists can safeguard their creative output and contribute to Ghana's development.

The weeks and the indicators covered by the section are:

- **Week 1:** Learners acquaint themselves with the Copyright Act of Ghana, 2005 (Act 690), Patent Act, 2003 (Act 657), Trademarks Act, 2004 (Act 664), Company Act, 2019 (Act 992) and their implications on art and design studio practices.

- **Week 2:** Investigate the art business registration, its importance and implications on art studio practice.
- Week 3: Investigate how art laws and policies inform societal development.

Having explored key components of art and design studio, learners build on these foundations to examine how they inform creative expression and studio practices. These earlier lessons set the stage for more advanced artistic exploration:

Recap indicators for the section

Year 1	Week 1: Document the components of Art and Design Studio: Sculpture, Painting, Graphic Design, Textiles, Ceramics, Jewellery, Leatherwork, Pliable Arts (Basketry, Fibres and Fabrics, etc.), and Contemporary Art. Week 2: Document the roles of the various components of the Art and Design Studio.
Year 2	Week 1: Examine etiquette to be observed in Art and Design Studio practices and their implication in teaching and learning the subject. Week 2: Develop an understanding of etiquette associated with Art and Design Studio practices. Week 3: Apply designing and finishing processes to create an artistic project to solve a social problem.

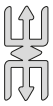
SUMMARY OF PEDAGOGICAL EXEMPLARS

This section employs collaborative and experiential learning approaches to help learners understand Ghana's laws governing the creative industry. Learners will work in mixed groups that mirror real-world creative collaborations to research and document relevant laws, including the Copyright Act of Ghana, 2005 (Act 690), Patent Act, 2003 (Act 657), Trademarks Act, 2004 (Act 664), Company Act, 2019 (Act 992), examining how these regulations affect art and design studios. Through mixed-ability group discussions, learners will explore the implications of the Intellectual Property and Copyright Act (Act 690) on their creative practices, helping them understand how to protect their original works. The learning experience extends to practical applications where learners in convenient groups will create infographic representations illustrating materials that can be copyrighted, patented, or registered as trademarks. This hands-on approach makes complex legal concepts more accessible and memorable. Additionally, collaborative group work will focus on examining the Patent Act of Ghana and its specific implications for art and design studio practices, giving learners a comprehensive understanding of how legal frameworks can both protect their creative work and shape their professional practices in Ghana's art industry.

ASSESSMENT SUMMARY

This section's assessment strategy evaluates students' understanding of art-related laws, business practices and policy implications through progressively challenging tasks aligned with multiple learning levels.

Week One's exploration of copyright and legal frameworks assessment employs case study analysis, where students identify relevant legal provisions and explain their application to specific art scenarios. This evaluates the progression from basic recall of legal provisions (DoK Level 1) to conceptual understanding of legal implications (DoK Level 2). Week Two's business registration investigation is assessed through simulation exercises where students complete mock registration processes and analytical reports examining registration benefits. Assessment criteria examine both procedural knowledge and strategic reasoning about business implications. Week Three's policy impact investigation culminates in research-based presentations where students analyse how specific art laws have influenced societal development. This extended critical thinking assessment (DoK Level 4) evaluates students' ability to synthesise legal knowledge with broader cultural analysis. Throughout the weeks, the assessment incorporates both individual written components, ensuring personal understanding, and collaborative tasks to develop their communication skills. Formative assessment through structured discussions provides ongoing feedback, while summative projects evaluate comprehensive understanding. This balanced approach ensures thorough evaluation of both factual knowledge and critical application across all learning indicators.



Note

A variety of assessment modes should be implemented to evaluate learners' understanding and performance in the concepts covered in this section. It is essential for teachers to conduct these assessments regularly to track learners' progress effectively. You are encouraged to administer the recommended assessments each week, carefully record the results, and submit them to the Student Assessment Portal (SAP) for documentation. The assessments involve Case study (Group Work), Analysis of scenarios (Group Work), Project-Based (Creativity and Collaboration), and Multiple-Choice Questions (Individual-based).

Learning Indicators	DOK Level	Assessment Strategy and/or Mode
Learners acquaint themselves with the Copyright Act of Ghana, 2005 (Act 690); Patent Act, 2003 (Act 657); Trademarks Act, 2004 (Act 664); Company Act, 2019 (Act 992); and their implications on art and design studio practices.	4	Project-Based Assessment: Provide learners with real copyright/ trademark infringement cases in Ghana's art industry for analysis

Learning Indicators	DOK Level	Assessment Strategy and/or Mode
Investigate the art business registration, its importance and implications on art studio practice	4	Case Study Assessment: Have learners develop a simulated business registration portfolio for an art studio
Investigate how art laws and policies inform societal development.	4	Poster Assessment: Create informational posters showing how art laws protect cultural heritage.
	2 & 3	Multiple Choice Questions

WEEK 1

Learning Indicator: *Learners acquaint themselves with the Copyright Act of Ghana, 2005 (Act 690); Patent Act, 2003 (Act 657); Trademarks Act, 2004 (Act 664); Company Act, 2019 (Act 992); and their implications on art and design studio practices*

FOCAL AREA: CREATIVE ART INDUSTRY LAWS, ETHICS AND THEIR IMPLICATION ON ART AND DESIGN STUDIO PRACTICES

1. Copyright Laws of Ghana
2. Intellectual Property Laws of Ghana

CREATIVE ART INDUSTRY LAWS, ETHICS AND THEIR IMPLICATION ON ART AND DESIGN STUDIO PRACTICES

Introduction

Ghana's creative art industry is guided by laws such as the Copyright Act, Patent Act, Trademarks Act, and Companies Act. These protect original works and ideas from unauthorised use and allow creators to benefit from their creations. Knowing these laws helps protect your work and earn from your talent. Ethical practice means respecting culture, being honest in business, and crediting sources of inspiration. In studio art, following these rules allows proper business registration, signing contracts confidently, getting loans, and building a good reputation. This knowledge supports both your success and the nation's cultural and economic progress.

Key Legal Frameworks in Ghana's Creative Arts Industry

The Copyright Act of Ghana (Act 690, 2005)

The Copyright Act, 2005 (Act 690) serves as the cornerstone of intellectual property protection for Ghanaian artists. It automatically protects original artistic works the moment they are created in tangible form, without requiring formal registration (though registration provides additional benefits). However, Copyright protection arises when the statutory requirements are satisfied; the existence of a tangible work alone should not be presented as an automatic guarantee for every work.

What the Copyright Act protects

- Visual artworks (paintings, sculptures, photographs, installations)
- Graphic designs, illustrations, and technical drawings
- Literary works (including books about art, artist statements, critical essays)
- Musical compositions and sound recordings

- Films, animations, and audio-visual works
- Computer programmes and software designs
- Architectural works and models
- Maps and technical renderings
- Dramatic works and choreography
- Rights granted under copyright:

The Trademarks Act (Act 664, 2004)

The Trademarks Act (Act 664, 2004) of Ghana protects unique signs, logos, and brand names that artists and designers create. When an artist registers a trademark, they gain the legal right to stop others from using their distinctive mark on similar products or services. For example, if an artist designs a special logo for their art studio or craft business, registering it as a trademark prevents others from copying it. This protection lasts for ten years and can be renewed.

Registration process: Trademark registration in Ghana involves activities at the Registrar General's Department (RGD) Using the following steps:

- Conducting a thorough search at the Registrar General's Department
- Filing an application with appropriate classifications
- Responding to any objections or oppositions
- Payment of prescribed fees
- Receiving trademark certificate valid for 10 years (renewable)
- The Patent Act (Act 657, 2003)
- The Patent Act protects inventions and innovative processes. While less commonly associated with fine arts, it becomes relevant for industrial designers, craftspeople, and those working at the intersection of art and technology.

What is Patent in Art?

A patent is relevant only where the subject matter satisfies the legal requirements to be patented. Artistic expression is generally addressed through copyright rather than patent law.

Differences between Patent and Copyright

Feature	Patent	Copyright
What it protects	New inventions, processes, or tools	Creative works like art, music, and writing
Requirements	Must be novel, useful, and non-obvious	Must be original and in tangible form
Registration	Must apply and be approved by the patent office	Automatic upon creation, registration is optional
Duration	20 years in Ghana	Life of the creator plus 70 years
Cost	Expensive to obtain and maintain	Free to create, small fee to register
Examples	New pottery kiln design, innovative textile dyeing method	Paintings, sculptures, photographs, poems
Test for infringement	If an invention performs the same function in the same way	If substantial similarity exists between works
Public disclosure	Full details must be disclosed in the application	Work is protected without revealing methods
Transfer	Can be sold or licensed to others	Can be sold or licensed to others

Benefits of formal registration

- Legal recognition and limited liability protection
- Ability to enter into formal contracts with clients, galleries, and suppliers
- Access to banking services, loans, and potential investment funding
- Tax compliance and potential benefits, including eligibility for certain grants
- Enhanced credibility with international partners and collectors
- Proper governance structure for growth and succession planning
- Ability to issue shares and bring in investors if desired

Enforcement Mechanisms and Remedies

When someone steals or copies an artist's work in Ghana, the artist can report to the Copyright Office or go to court for help. The court can order the copying to stop and make the person pay money to the artist. In serious cases, the person who copied might pay fines or go to jail. The Copyright Office of Ghana, offers registration services and can assist with infringement claims. Some of the enforcement and remedy strategies are:

- Injunctions to stop infringing activity
- Seizure of infringing materials
- Damages (compensation for losses)

- Account of profits (surrender of profits made from infringement)
- Criminal penalties for commercial-scale infringement

Alternative Dispute Resolution

Not all disputes need to go to court. Ghana has strong and reliable ADR (Alternative Dispute Resolution) mechanisms that can be less costly and more efficient: some of these are:

- Mediation through the Copyright Office
- Arbitration via the Ghana Arbitration Centre
- Negotiated settlements facilitated by legal representatives



Figure 1.1: *Black over-ear headphone*

Figure 1.1 shows a picture of black over-ear headphones resting on a bright orange background. The background also features abstract purple shapes and circles, giving the image a modern and playful look. The headphones are positioned with the ear cups facing forward and the headband at the top.

Ethical Considerations in Art and Design

Cultural Appropriation and Traditional Knowledge

Cultural appropriation happens when artists use traditional elements from a culture without permission or understanding. For example, using Dagomba drum patterns or Ewe Kete cloth designs without acknowledging their origins is unethical.

Ethical considerations

- Acknowledge and respect the origins of traditional designs, motifs, and techniques
- Seek permission when incorporating protected cultural expressions or working with specific community designs
- Consider fair compensation to communities when commercialising traditional knowledge
- Understand the specific cultural significance and sacred nature of certain symbols
- Distinguish between appreciation (respectful engagement) and appropriation (taking without context or permission)
- Collaborate with culture bearers rather than simply extracting knowledge

Authenticity and Attribution

Authenticity in art means creating original work that represents the artist's ideas or acknowledges inspirations, avoiding copying while developing a unique voice. Attribution on the other hand, involves properly crediting sources of inspiration, techniques, or cultural elements used in artwork.

Ethical practices in Authenticity and Attribution

- Clearly distinguishing between original works and those inspired by others
- Properly attributing collaborative works and acknowledging assistants
- Maintaining honest provenance records for artworks
- Transparent disclosure of materials and processes
- Clear communication about edition sizes for prints or multiple

Environmental Ethics

Environmental ethics in art involves creating work that respects nature and minimises harm. Artists should choose sustainable materials, recycle where possible, and avoid toxic chemicals. Proper waste disposal is essential, especially for harmful substances.

Client and Commercial Relationships

Ethical considerations extend to how artists interact with clients, galleries, and collectors. it is a relationship that requires honesty, fairness, and professionalism. Artists should use clear contracts specifying deadlines, payments, and ownership rights. They must deliver promised work, charge fair prices, and maintain client confidentiality.

Collection management software

Collection management software is a digital tool that helps artists and museums keep track of their artwork. it is another way of protecting art and design works from copyright infringement. These programs store information about each piece, like who made it and where it is kept. In Ghana, museums use programs like PastPerfect and ArtLogic to add photos, check artwork condition, and organize exhibitions. These tools prevent artwork from getting lost and make finding information easy. some of these tools include:

- Cloud storage with appropriate security
- Blockchain registration for digital works
- Time-stamped digital signatures
- Metadata embedding in digital images
- Contracts and Agreements

Essential contracts

Artists should use simple written agreements that clearly state who will pay what, who owns the artwork, and how it can be used. Without clear contracts, arguments often

destroys a good working relationships. Good contracts protect both artists and clients from being treated unfairly.

Digital protection strategies

Digital protection strategies is another way by which Artists can stop people from stealing their artwork online. In some cases, these protection methods might make it harder for people to see and enjoy the art properly.

Current issue: Several l artists have had their works stolen and minted as NFTs (Non-Fungible Tokens) without permission, highlighting the need for vigilance in monitoring online use of artistic works (e.g., Devin Elle Kurtz and Qing Han). To forestall this the Ghana's copyright law, in conjunction with the art community has established guidelines for ethical practices in art practice, especially in the digital art space.



Figure 1.2: *Watermarks on online portfolio images*

The image in Figure 1.2 shows a mountain range rising in the background, with rough peaks. In the foreground, a large waterbody, possibly a lake or river, stretches in front of the mountains, showing the surrounding landscape. There are a couple of small boats or canoes on the lake. The sky appears clear or slightly clouded. Vegetation, such as trees or shrubs are not clearly seen. Across the surface of the picture are eleven circular, white watermarks arranged in three horizontal lines, one on top of the other (4 on one line, 3 under the first four, and 4 under the 3 watermarks).

International Dimensions

Ghanaian artists increasingly operate in global contexts, requiring awareness of international frameworks. Some of the international treaties and conventions that govern their practice include:

- Berne Convention (international copyright protection)
- WIPO Copyright Treaty (digital and internet protections)
- UNESCO Convention on Cultural Diversity
- WTO TRIPS Agreement (trade-related intellectual property)

Resources for Artists

Several organisations provide support and information for artists navigating legal and ethical issues:

- Copyright Office of Ghana - Ministries, Copyright registration, infringement assistance, educational programs.
- Ghana Association of Visual Artists (GAVA) Arts Centre, Accra Services: Professional development, advocacy, standard contracts, dispute resolution.
- Creative Arts Agency Ministry of Tourism, Arts and Culture Services: Policy guidance, creative industry support, international promotion.
- Ghana Design Network Services: Professional standards for designers, client relationship guidance, contract templates.
- Law and Development Associates (LADA) Provides specialised legal services for creative practitioners

Learning Tasks

Mini Project for Weeks 1-3: The Art of Legal Reinterpretation

Duration 4 hours (*this project should spread across the 3 weeks)*

Project Brief or Theme: "Walking the Line: Inspiration vs. Infringement"

This project challenges you to:

1. Deliberately copy elements of an existing artwork using malleable materials by transforming the original through specific techniques to avoid copyright infringement and incorporating recognisable symbols that demonstrate your understanding of intellectual property.
2. Document your legal safeguarding strategies

Project Structure

Phase 1: Understanding the Legal Boundaries

1. Examine the fine line between inspiration and infringement:
    - What constitutes copyright infringement in Ghana under Act 690?
    - When does "inspiration" become illegal copying?
    - What transformations make a work legally distinct?
    - How do famous artists legally reference others' work?

Phase 2: Strategic Planning

1. Select an existing artwork or design you will deliberately reference

2. Plan your "copyright-safe" transformation strategy using techniques like:
   - Substantial transformation of form or dimension
   - Radical change of medium or materials
   - Parody or critical commentary
   - Significant stylistic alteration
   - Functional transformation
   - Cultural recontextualisation

3. Sketch your planned transformations, highlighting what you will copy and what you will change

Phase 3: Creating Your Transformed Work

Using malleable materials, create a 3D artwork that deliberately walks the line between inspiration and infringement.

Required Elements

- Clear visual reference to the original work (deliberate copying)
- Use reference as inspiration. make sure to create proper attribution for the work. create permission seeking letters. create public domain and applicable exceptions symbols for your work.
- Identify and incorporate of at least one intellectual property symbol into your design properly
- Distinctive creative elements that make your work uniquely yours

Suggested Materials

- Clay or plasticine
- Paper mâché
- Wire and foil
- Textile and fabric
- Cardboard and paper construction
- Found objects and recycled materials
- Mixed media combinations

Transformation Techniques to Try

- Change dimensions (2D to 3D or vice versa)
- Fragment and reassemble elements
- Introduce new contextual elements

- Alter scale dramatically
- Combine with unrelated imagery
- Change the material's inherent properties

Phase 4: Legal Documentation (20 points)

Create a professional "Legal Safeguarding Statement" that includes:

1. **Side-by-Side Comparison**
   - Image or sketch of the original work
   - Photo of your transformed work
   - Visual indicators of what was copied and what was transformed
2. **Copyright Navigation Strategy**
   - List specific transformations you made to avoid infringement.
   - Explain how each transformation helps make your work legally distinct.
   - Identify which elements required attribution and how you provided it.

Assessment Criteria (30 Marks)

Criterion	Marks	Excellent (8 – 10)	Very Good (6 – 7)	Satisfactory (4 – 5)	Needs Improvement (1 – 3)
Artistic Transformation	10	Demonstrates sophisticated transformation strategies that completely reinvent the original	Demonstrates appreciable transformation strategies that attempt to reinvent the original	Demonstrates satisfactory transformation strategies but maintain recognisable references	Makes minimal or no changes to the original design
Legal Understanding	10	Demonstrates excellent comprehension of intellectual property law with strategic application	Demonstrates a very good understanding of intellectual property law with minimal application	Demonstrates satisfactory understanding of intellectual property law	Shows basic awareness of copyright boundaries
Symbol Integration	10	Creatively integrates symbols in ways that enhance both design and legal meaning	Able to integrate symbols that explain design, but limited legal meaning	Integrates symbols in design, but without projecting legal meaning	Includes required symbol(s) with minimal integration without projecting legal meaning

Differentiation Strategies

- Provide visual examples of legal vs. infringing transformations.
- Allow for selection from a curated list of public domain works.
- Offer various malleable materials to suit different abilities.
- Provide templates for legal documentation.
- Allow for collaborative work where beneficial.

PEDAGOGICAL EXEMPLARS

- Group Work/ Collaborative Learning: In mixed groups research and document with relevant digital and manual resources laws and Acts that relate to the creative art industry in Ghana and their implications on art and design studio practices.
- Group Work: In mixed-ability groups, examine the implications of the Intellectual Property and Copyright Act, 2005 (Act 690) of Ghana on art and design studio practice.
- Group Work/ Collaborative Learning/Experimental Learning: In convenient groups explore to create infographic posters on materials that could be copyrighted, patented and registered for trademarks. Do not forget to add watermarks to protect digital works.
- Group Work/ Collaborative Learning: In mixed-ability groups, examine the Patent Act of Ghana and its implication on art and design studio practices.

KEY ASSESSMENT

Level 4:Individual Class Exercise

Brief 1: IP Protection Strategy: Registration Diagram

Task: Create a comprehensive visual diagram (flowchart or infographic) or make a presentation that clearly illustrates the step-by-step processes for registering and protecting artistic work under Ghana's relevant intellectual property laws.

PLC SESSION 1

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand

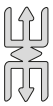
b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).

3. Use your subject specific app to plan your lesson. Ask the app to

a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.

b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)

c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app

a. The key assessment for the week is ***individual class exercise***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the exercise (NTS 3k-3q).

10 minutes	Content Exploration

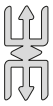
5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then

a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 2

Learning Indicator: *Investigate the art business registration, its importance, and implications on art studio practice*

FOCAL AREA: BUSINESS REGISTRATION, ITS IMPORTANCE AND IMPLICATIONS ON ART STUDIO PRACTICE

1. Business registration
2. How to register an Art Business

BUSINESS REGISTRATION IN GHANA: WHY IT MATTERS FOR THE ART STUDIO

Introduction

Understanding how to register an art business properly is the first step for any aspiring professional artist in Ghana. This knowledge forms the foundation for legitimate creative practice and entrepreneurship in the visual arts. The process of art business registration, and why it matters for the art as well as career, how formal registration affects daily studio operations, is essential to the artist. By learning about the legal frameworks that govern art businesses, the artist will be better prepared to transform their creative passion into a sustainable profession that contributes to Ghana's cultural and economic development. The skills developed will help to navigate the business aspects of art while maintaining artistic integrity and vision.

What is Business Registration?

Business registration is the formal process of making your business known to the government and the public. In Ghana, this is done through the Registrar General's Department (RGD). The registration provides information about the business on:

- the ownership.
- kind of activities (e.g. art, fashion, design).
- location of the studio.
- the name of the business.

Table 1: *Importance of Business Registration*

Reason	Why it matters for Art Studios
Legal Protection	You will not get into trouble for operating an unregistered business.
Ownership of Your Name	No one else can use your art studio's name once it is registered.
Professional Image	Clients take you more seriously when you are registered.
Access to Support	You can apply for funding, grants, and take part in art fairs/exhibitions.
Tax Compliance	You can get a TIN and pay the right taxes.
Business Growth	Makes it easier to open a business account or partner with organisations.

Benefits of Registration on Art Studio Practice

1. Gives the studio legal recognition to operate without trouble from authorities Registration makes the studio official, so it can run legally without being stopped or fined by the government.
2. Builds trust and shows professionalism to clients and the public People are more likely to work with a registered studio because it shows the artist is serious and reliable.
3. Attracts more business and job opportunities. Clients, companies, and organisations often prefer to work with studios that are properly registered.
4. Makes it easier to access government and private support, such as grants, loans, and training

Many support programmes require studios to be registered before they can apply for help.

Examples of registered Art Studio Businesses

- Artist Alliance – Represents and promotes artists' works, sells paintings and other artworks.
- El Carna Studio – Specialises in illustration, logos, and animation
- Nkyinkyim Museum – Documents and teaches African history and culture through art, performance, and community engagement.
- Tiga Gallery (Tiga African Art) – Art consultancy and gallery representing top Ghanaian artists.
- Studio Lumière – Provides photography and editing services.
- The Oasis Studios **-** Portrait Photography, Product Photography, and Programme Coverage.

- Effects Studio - Designing, animations, photography, web design and development, and branding.
- Blackpixels Gh - Visual branding, design, and social media marketing in Ghana.

Business registration is an important step for any young artist in Ghana. It helps protect your ideas, shows that you are professional, and gives you more chances to grow.

Table 2: *Types of Art & Design Businesses you can register*

Business Idea	Description
Freelance Artist/Designer	Offer your skills in drawing, painting, or digital art to clients.
Fashion Brand	Design and sell clothes, bags, or accessories.
Graphic Design Services	Make billboards, logos, posters, and adverts for clients.
Crafts or Handmade Goods	Make and or sell handmade objects, jewellery, home décor, or souvenirs.
Art Classes or Tutorials	Teach painting, digital art or design skills.

How to register an Art and Design Business in Ghana

Outline of steps needed to register an Art Studio in Ghana

1. Choose the type of business (Sole Proprietor, Partnership, Company limited by shares, etc.)
2. Choose a business name – Make it creative and unique.
3. Visit the Registrar General's Department (RGD) or access www.rgd.gov.gh.
4. Apply for a TIN from the Ghana Revenue Authority (GRA).
5. Fill out the business name registration forms.
6. Pay the registration fee (around GH¢100–450 for small studios). This is subject to change.
7. Get your certificate of registration.

Learning Tasks

Task 1: ***Continue with the Mini-Project in Week 1***

Scenario: A group of artists want to start a creative studio offering services in digital art and mural design. They are debating whether to operate informally or register as a limited liability company.

Question: Explain three specific benefits that registering as a limited liability company under Ghana's Company Act 2019 (Act 992) would provide to this creative studio.

PEDAGOGICAL EXEMPLARS

Experiential Learning; Group/Collaborative Learning: In convenient groups, analyse the processes involved in the registration of art and design businesses in Ghana and its implications on studios from practitioners.

KEY ASSESSMENT

Level 3: Case Study

Scenario: A group of artists plan to start a creative studio offering services in digital art and mural design. They are debating whether to operate informally or register as a limited liability company.

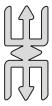
Question: Explain three specific benefits that registering as a limited liability company under Ghana's Company Act 2019 (Act 992) would provide to this creative studio.

Note: *You can obtain a business registration form and hand it over to learners to support their work.*

PLC SESSION 2

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
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Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app

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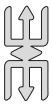
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WEEK 3

Learning Indicator: *Investigate how art laws and policies inform societal development*

FOCAL AREA: RELATIONSHIP BETWEEN LAWS AND SOCIETAL DEVELOPMENT

1. Effect of laws on development
2. How Art Laws Positively Affect Societal Development

RELATIONSHIP BETWEEN LAWS AND SOCIETAL DEVELOPMENT

In Weeks 1 and 2, we learned that **Laws** are official rules made by the government to guide how people behave in a country. They tell us what is **right or wrong**, **allowed or not allowed**. Their enforcement helps keep order, protect rights, and ensure fairness in society. Examples of how the enforcement of Laws helps to keep **order**, **peace**, and **fairness** in society are in areas such as:

- avoiding theft
- payment of taxes
- safety in the community
- obeying road signs
- protecting the environment

We also learned that **Societal development** is how a society improves over time by making progress in the areas of:

- Education
- Healthcare
- Economy (money and jobs)
- Technology
- Human rights
- Infrastructure (roads, electricity, clean water)
- Fairnes, safety and equal rights for all

How Laws Support Societal Development

Area	How Laws Help Development
Education	Laws make schooling compulsory, helping more people become educated.
Health	Health laws ensure hospitals are safe and clean. Some laws prevent the spread of diseases.
Business	Business laws protect buyers and sellers, encourage investment, and create jobs.
Environment	Environmental laws stop pollution and protect forests, rivers, and animals.
Human Rights	Laws protect children, women, and all citizens from abuse and unfair treatment.
Security	Criminal laws reduce crime and help people feel safe to live and work.

How Laws Impact Development

Laws play a major role in helping a country grow and improve. Some of the areas it impacts are:

1. *Education:* There are various laws that have been made to enhance education, such as the law that makes basic education free and compulsory helps more children attend school. This helps to create an educated population, leading to innovation, better jobs, and stronger communities.
2. *Health*: Laws on proper health delivery are made to ensure that qualified people engage in health delivery, and that hospitals are clean, drugs are safe, and diseases are controlled. This leads to a population of healthy people who can work and contribute more to national development.
3. *Business Growth*: Business and tax laws protect both customers and sellers, making it easier to start and run a business. As a result of this, more businesses can be created to ensure jobs, boost the economy, and reduce poverty.
4. *Environmental Protection*: Environmental laws are enacted to protect the environment by reducing pollution and encouraging proper waste management. This helps to create a cleaner environment, supports farming, tourism, and health.
5. *Peace and Security*: Criminal laws are made to punish crimes and maintain order in society, to create peaceful communities that can attract investment and allow people to live and work safely.
6. *Equality and Justice*: These are mostly human rights and laws for the vulnerable that protect the rights of women, children, and people with disabilities. They are usually created to everyone has a fair chance to contribute to national development. When a country has strong, fair, and well-enforced laws, people are safer, healthier, more educated, and more productive. This leads to a better life for all.

Summary Table

Area of Life	Law Involved	Effect on Development
Education	Free and compulsory basic education	More educated youth, better jobs
Health	Public health and safety laws	Healthy citizens, fewer diseases
Economy	Business and tax laws	Job creation, economic growth
Environment	Anti-pollution laws	Clean air, land, and water
Security	Criminal laws	Peaceful and stable society
Human Rights	Equality and protection laws	Fairness, unity, and inclusion

Art Laws

Art laws are rules and regulations that protect the rights of artists and control how art is created, shared, sold, and used. These include:

- Copyright laws (protect an artist's original work)
- Cultural heritage laws (protect traditional and historical art)
- Public art policies (guide how art is used in public spaces)
- Intellectual Property (IP) laws (protect designs, music, and creative ideas)

How Art Laws Help Society Develop

Here are some ways art laws support the growth of a strong and vibrant society:

1. Promote Creativity and Innovation: Art laws protect the ideas of artists, so they feel safe to be creative. It helps more people to explore careers in design, music, fashion, and crafts, encouraging innovation in society.
2. Economic Growth: Copyright and Intellectual Property (IP) laws allow artists to earn money legally from their work. This boosts their trades, and helps them to generate more wealth to support families, and helps reduce poverty.
3. Protection of Cultural Heritage: Cultural protection laws preserve traditional art, music, and symbols of Ghana. through this, the society maintains its identity and passes values to future generations.
4. Prevention of Theft and Exploitation: Art laws discourages people from copying or selling someone's work without permission. Artists get the credit and income they deserve, building trust and fairness in society.
5. Encourage Public Art and Expression: the various Art Laws allow cities to support public murals, sculptures, and street art in the right ways. these artworks help to beautifies communities, educates people, and encourages peaceful expression.

Learning Tasks

Task: Continue the Mini-Project in Week 1.

PEDAGOGICAL EXEMPLARS

The assessment mode in the 'Key Assessment' section should reflect in the selection of the pedagogy. This should focus on real world application.

- *Group Work/Collaborative Learning:* In small groups research into the benefits of laws on intellectual property and business registration in relation to art and design studio practice; and discuss the impact of art business and its implication on art and design studio practice.

Group dynamics should consider gender, learning and biopsychosocial needs of learners.

KEY ASSESSMENT

Levels 2 & 3: Multiple Choice Questions

1. An artist collective is considering registering its studio as a business. Which analysis best explains how this registration would affect their intellectual property rights?

A. Creates a legal entity that can own and license collective creative works

B. Extends protection periods for works created within the studio space

C. Establishes shared copyright management for collaborative projects

D. Enables specialised exhibition arrangements with global institutions

2. Which scenario demonstrates the most significant implication of the Cppyright Act, 2005 (690) for art studio practice?

A. Recognises ownership of technical processes developed within studios

B. Establishes registration protocols for public display of new creations

C. Protection against unauthorized commercial use by market competitors

D. Provides cultural significance considerations for taxation purposes

3. How does formal art business registration most significantly contribute to societal development in Ghana?

A. Creates documented creative economy contributing to national revenue

B. Creates formal pathways for traditional knowledge in formal education

C. Establishes community apprenticeship opportunities for local talents

D. Implements quality standards for recognition in international markets

4. Which of these legal approaches would best protect the work of a ceramics studio artist who creates distinctive pottery using traditional Ghanaian patterns and cultural heritage?

A. Apply for designated rights to traditional patterns from the region

B. Establish heritage collaboration trust with originating communities

C. Operate with flexible registration, accommodating cultural practices

D. Register business and copyright specific artistic interpretations

5. Select the best conclusion when analysing the relationship between art laws and community development.

A. Creates structured pathways for artistic expression in public spaces

B. Focuses on preserving significant cultural forms for future generations

C. Maintains community standards in expressions of collective identity

D. Provides frameworks for artists to secure benefits from their work

6. An art collective creates public murals addressing social issues. Choose the statement that best analyses the intersection of their business registration status and artistic impact.

A. Non-registration allows community-focused approaches to local issues

B. Non-registration offers alternative pathways for artistic expression

C. Registration includes opportunities for content review and feedback

D. Registration strengthens funding access while maintaining creative freedom

7. Select which analysis correctly identifies the relationship between the Patent Act, 2003 (657) and innovation in art studios?

A. Enables protection of novel technical processes in artistic production

B. Distinguishes between artistic methods and industrial applications clearly

C. Defines parameters for materials use in fine art and craft production

D. Encourages documentation of artistic techniques for knowledge preservation

8. A graphic design studio is evaluating business structures. Based on Ghana's Company Act 2019 (Act 992), which conclusion about limited liability companies is most accurate?

A. Allows allocation options for investing in cultural development initiatives

B. Provides structure for managing diverse artistic and commercial activities

C. Protects personal assets while creating pathways for business expansion

D. Establishes professional leadership requirements for creative enterprises

9. Choose the statement that accurately analyses how intellectual property laws affect cultural preservation in Ghana?

A. Recognises traditional design heritage within formal intellectual property

B. Balances heritage protection with opportunities for artistic innovation

C. Establishes community consultation protocols for using cultural elements

D. Addresses public domain expressions through specific legal provisions

10. An art educator wants to establish a teaching studio. Which analysis of business registration implications is most accurate?

A. Establishes legal framework for educational contracts and materials use

B. Allows parallel creative production and formal educational activities

C. Includes provisions for teaching traditional techniques to new students

D. Incorporates educational assessment standards for professional training

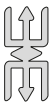
Section 1 Review

This section focused on how Ghana's art and design profession is firmly supported by crucial legal policies, including the Copyright Act, 2005 (690), Companies Act, 2019 (Act 992), Trademarks Act, 2004 (Act 664), Patent Act, 2003 (657), which together create a protective framework for creative works, inventions and brand identities whilst enabling proper business registration. These vital laws provide artists with the security to claim ownership of their creations, shield their work from unauthorised copying, confidently sell or license their art, and gain access to important opportunities such as legal contracts and banking services. Learners develop a thorough understanding of these legal foundations through hands-on, collaborative learning activities where they explore and explain relevant laws affecting creative practice, apply these legal frameworks directly to their own artistic work, learn to prepare straightforward intellectual property documentation, recognise how properly registering a business contributes to professional development, and assess how art-related policies influence cultural growth in communities. This practical, experience-based approach transforms abstract legal concepts into meaningful, everyday tools that creative practitioners can readily use. By engaging with both the theoretical and practical aspects of art-related law, learners develop not only essential knowledge about protecting their creative output but also valuable collaborative skills that prepare them thoroughly for successful careers in Ghana's dynamic creative industries.

PLC SESSION 3

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app
   a. The key assessment for the week is ***multiple choice questions***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the assessment (NTS 3k-3q).

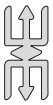
10 minutes	Content Exploration

5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then
   a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

APPENDIX: MARKING SCHEMES FOR THE KEY ASSESSMENTS

WEEK 1

Assessment Criteria

Criteria (8 marks)	Excellent (7-8)	Very good (5-6)	Satisfactory (3-4)	Needs improvement (1-2)
Content Accuracy	Any 4 of these examples of registering and protecting artistic work under Ghana's relevant intellectual property laws include the following steps: 1. Determine the type of work: Identify whether your work is a painting, sculpture, music, or literature. 2. .Gather necessary documents: Collect all relevant documents that prove your authorship and the originality of your work. 3. Visit the Copyright Office: Go to the Copyright Office of Ghana to obtain the necessary forms for registration. 4. Complete the application: Fill out the application form with accurate details about your work, including title, type, and date of creation.	Any 3 of these examples of registering and protecting artistic work under Ghana's relevant intellectual property laws include the following steps: 1. Determine the type of work: Identify whether your work is a painting, sculpture, music, or literature. 2. Gather necessary documents: Collect all relevant documents that prove your authorship and the originality of your work. 3. Visit the Copyright Office: Go to the Copyright Office of Ghana to obtain the necessary forms for registration.	Any 2 of these examples of registering and protecting artistic work under Ghana's relevant intellectual property laws include the following steps: 1. Determine the type of work: Identify whether your work is a painting, sculpture, music, or literature. 2. Gather necessary documents: Collect all relevant documents that prove your authorship and the originality of your work.	Any 1 of these examples of registering and protecting artistic work under Ghana's relevant intellectual property laws include the following steps: 1. Determine the type of work: Identify whether your work is a painting, sculpture, music, or literature. 2. Gather necessary documents: Collect all relevant documents that prove your authorship and the originality of your work.

Criteria (8 marks)	Excellent (7-8)	Very good (5-6)	Satisfactory (3-4)	Needs improvement (1-2)
Process Clarity	Any 4 of these examples Identify the type of artistic work you wish to register, such as a painting, sculpture, or musical composition. Prepare the necessary documentation, including a completed application form and proof of your ownership of the work. Submit your application to the Copyright Office of Ghana along with the required fees. Await confirmation of your registration, which will provide you with legal protection under Ghana's intellectual property laws.	Any 3 of these examples Identify the type of artistic work you wish to register, such as a painting, sculpture, or musical composition. Prepare the necessary documentation, including a completed application form and proof of your ownership of the work. Submit your application to the Copyright Office of Ghana along with the required fees.	Any 2 of these examples Identify the type of artistic work you wish to register, such as a painting, sculpture, or musical composition. Prepare the necessary documentation, including a completed application form and proof of your ownership of the work.	Any 1 of these examples Identify the type of artistic work you wish to register, such as a painting, sculpture, or musical composition.
Visual Organisation	Any 4 of these examples; Conducting a search on the Ghana Copyright Office's database to verify the originality of your artistic work. Preparing a portfolio that includes sketches, drafts, or recordings that illustrate the development of your artistic work. Regularly checking for any unauthorized reproductions of your work online and taking action to enforce your rights.	Any 3 of these examples; Conducting a search on the Ghana Copyright Office's database to verify the originality of your artistic work. Preparing a portfolio that includes sketches, drafts, or recordings that illustrate the development of your artistic work.	Any 2 of these examples; Conducting a search on the Ghana Copyright Office's database to verify the originality of your artistic work. Preparing a portfolio that includes sketches, drafts, or recordings that illustrate the development of your artistic work.	Any 1 of these examples; Conducting a search on the Ghana Copyright Office's database to verify the originality of your artistic work.

Criteria (8 marks)	Excellent (7-8)	Very good (5-6)	Satisfactory (3-4)	Needs improvement (1-2)
Practical Application	Any 4 of these examples; Copyright registration for visual arts, allowing artists to protect their paintings and sculptures. Trademark registration for brand names and logos used by Ghanaian musicians to safeguard their identity. Industrial design protection for unique fashion designs created by Ghanaian designers. Geographical indications for traditional Ghanaian crafts, ensuring that only local artisans can market these products as authentic.	Any 3 of these examples; Copyright registration for visual arts, allowing artists to protect their paintings and sculptures. Trademark registration for brand names and logos used by Ghanaian musicians to safeguard their identity. Industrial design protection for unique fashion designs created by Ghanaian designers.	Any 2 of these examples; Copyright registration for visual arts, allowing artists to protect their paintings and sculptures. Trademark registration for brand names and logos used by Ghanaian musicians to safeguard their identity.	Any 1 of these examples; Copyright registration for visual arts, allowing artists to protect their paintings and sculptures.
Visual Appeal	Any 4 of these examples; Copyright registration for original artistic works such as paintings and sculptures under the Copyright Act of Ghana. Trademark registration for logos and brand names associated with artistic products to protect brand identity. Industrial design registration for unique designs of products that have aesthetic value, ensuring protection against unauthorized use. The use of moral rights under the Copyright Act to protect the personal and reputational interests of artists in their works.	Any 3 of these examples; Copyright registration for original artistic works such as paintings and sculptures under the Copyright Act of Ghana. Trademark registration for logos and brand names associated with artistic products to protect brand identity. Industrial design registration for unique designs of products that have aesthetic value, ensuring protection against unauthorized use.	Any 2 of these examples; Copyright registration for original artistic works such as paintings and sculptures under the Copyright Act of Ghana. Trademark registration for logos and brand names associated with artistic products to protect brand identity.	Any 1 of these examples; Copyright registration for original artistic works such as paintings and sculptures under the Copyright Act of Ghana.

Assessment Criteria (30 marks)

Criteria (10 marks)	Excellent (8 - 10)	Very Good (6 - 7)	Satisfactory (4 - 5)	Needs Improvement (1 - 3)
Benefit 1: Limited Liability	Any 4 correct examples; Limited personal liability for owners Enhanced credibility with clients and partners Access to funding and investment opportunities Tax benefits and incentives	Any 3 correct examples; Limited personal liability for owners Enhanced credibility with clients and partners Access to funding and investment opportunities	Any 2 correct examples; Limited personal liability for owners Enhanced credibility with clients and	Only 1 correct example; Limited personal liability for owners
Benefit 2: Legal Entity Status	Any 4 correct examples; Legal protection for personal assets: By registering as a limited liability company, the owners of the creative studio can protect their personal assets from business liabilities, ensuring that personal property is not at risk in case of legal issues. Enhanced credibility: Being a registered entity under Ghana's Company Act 2019 (Act 992) enhances the studio's credibility with clients and partners, making it easier to secure contracts and collaborations.	Any 3 correct examples; Legal protection for personal assets: By registering as a limited liability company, the owners of the creative studio can protect their personal assets from business liabilities, ensuring that personal property is not at risk in case of legal issues.	Any 2 correct examples; Legal protection for personal assets: By registering as a limited liability company, the owners of the creative studio can protect their personal assets from business liabilities, ensuring that personal property is not at risk in case of legal issues.	Only 1 correct example; Legal protection for personal assets: By registering as a limited liability company, the owners of the creative studio can protect their personal assets from business liabilities, ensuring that personal property is not at risk in case of legal issues

Criteria (10 marks)	Excellent (8 – 10)	Very Good (6 – 7)	Satisfactory (4 – 5)	Needs Improvement (1 – 3)
	Tax benefits: Limited liability companies may enjoy certain tax advantages, such as lower tax rates on profits compared to personal income tax rates, which can lead to increased profitability for the studio. Attracting investment: Registration as a limited liability company can make it easier for the creative studio to attract investors or secure loans, as it presents a more formal and structured Business Credibility business model.	Enhanced credibility: Being a registered entity under the Ghana's Company Act 2019 (Act 992) enhances the studio's credibility with clients and partners, making it easier to secure contracts and collaborations. Attracting investment:	Enhanced credibility: Being a registered entity under the Ghana's Company Act 2019 (Act 992) enhances the studio's credibility with clients and partners, making it easier to secure contracts and collaborations	
Benefit 3: Business Credibility	Any 4 correct answer; Enhanced client trust through formal recognition as a legal entity, ensuring clients feel secure in their transactions. Improved access to funding opportunities, as banks and investors are more likely to engage with registered companies. Limited liability protection for owners, safeguarding personal assets from business debts and liabilities. Increased credibility and professionalism, which can attract more clients and partnerships in the creative industry.	Any 3 correct answer; Enhanced client trust through formal recognition as a legal entity, ensuring clients feel secure in their transactions. Improved access to funding opportunities, as banks and investors are more likely to engage with registered companies. Limited liability protection for owners, safeguarding personal assets from business debts and liabilities.	Any 2 correct answer; Enhanced client trust through formal recognition as a legal entity, ensuring clients feel secure in their transactions. Improved access to funding opportunities, as banks and investors are more likely to engage with registered companies.	Only 1 correct answer; Enhanced client trust through formal recognition as a legal entity, ensuring clients feel secure in their transactions.

WEEK 3

Question Number	Correct Answer
1	c
2	a
3	d
4	b
5	c
6	b
7	b
8	d
9	d
10	d

SECTION 2: MAKING ART MEDIA AND SOFTWARE APPLICATION

STRAND: ART AND DESIGN THEORIES AND APPLICATION

Sub-Strand: Material Classification and Methods

Learning Outcome: *Explore with natural and man-made materials for art making*

Content Standard: Demonstrate knowledge and understanding of art and design media formulation and use in creating art and design.

INTRODUCTION AND SECTION SUMMARY

This section explores the link between traditional art media and digital simulation, guiding learners along two creative paths. Learners will research how to make art materials using natural sources like plant pigments and binders, as well as synthetic options, encouraging sustainable use of local resources. Alongside this, they will use digital tools to simulate the look and feel of these materials, gaining insight into how software translates physical qualities into digital forms. By comparing both methods, learners will better understand the chemistry, environmental impact, and aesthetics of various media while building key digital skills. This combined approach strengthens creativity, connects learners to historical practices, and prepares them for today's blended art and design world. The skills gained will support innovative work that fuses tradition with technology, helping learners shape a personal and informed artistic voice.

The weeks and the indicators covered by the section are:

- Week 4: Research into recipes for making art media from natural and artificial sources.
- Week 5: Use computer software applications to simulate effects of art media.

Having explored key components of art and design studio, learners now build on these foundations to explore with natural and manmade materials for art making. These earlier lessons set the stage for more advanced artistic exploration.

Recap indicators for the section

Year 1:	Week 1: Discuss art materials according to nature, technique and purpose. Week 2: Discuss the basic methods for preparing and storing art media.
Year 2:	Week 1: Experiment to develop natural colours from natural food sources Week 2: Analyse how image-making and repeat processes and techniques for creating 2-dimensional artworks can be undertaken with relevant tools and materials.

SUMMARY OF PEDAGOGICAL EXEMPLARS

This teaching sequence uses varied strategies to build learners' understanding of traditional and digital art media. It starts with structured questioning to sort natural and artificial materials into wet and dry types, laying a clear foundation. Learners then work in mixed-ability groups to analyse how dry media can be made from natural sources, encouraging teamwork and peer support. Next, through hands-on and project-based learning, students collect and process materials with suitable binders and fixatives, turning theory into practice. At the same time, problem-based tasks lead learners to examine artworks and identify the digital tools used, deepening their grasp of software functions through group discussion. The sequence ends with a well though through Mini class projects where learners use environmental inspiration and digital tools as well as the knowledge and skills they have acquired from their studies to create artworks. This approach blends practical work with critical thinking, traditional methods with digital processes, and personal exploration with teamwork.

ASSESSMENT SUMMARY

This section uses focused assessment strategies to evaluate learners' ability to research traditional art media and simulate their effects digitally. In Week 4, assessment is based on research portfolios where learners gather and categorise recipes from various sources. Early stages assess material identification (DoK Level 1) and understanding of preparation methods (DoK Level 2). Higher levels assess hands-on testing, with learners experimenting, recording outcomes, and evaluating results to show strategic thinking (DoK Level 3). In Week 5, assessment shifts to software demonstrations and digital portfolios. Learners create digital versions of traditional media, assessed on tool use and how accurately effects are replicated. At Level 4, critical thinking is tested through comparative analysis of traditional and digital methods, identifying strengths and limits of each. Across both weeks, assessment balances research and practical work, (Mini-Projects) checking both theory and application. This approach tests how well learners connect traditional techniques with digital tools while promoting creative use of materials.

Note

A variety of assessment modes should be implemented to evaluate learners' understanding and performance in the concepts covered in this section. It is essential for teachers to conduct these assessments regularly to track students' progress effectively. You are encouraged to administer the recommended assessments each week, carefully record the results, and submit them to the Student Assessment Portal (SAP) for documentation. The assessments are; Research-based, e-Assessment Portfolio Strategy and Project-based presentation

Mainly Project-based presentation

Learning Indicators	DOK Level	Assessment Strategy and/or Mode
Research into recipes for making art media from natural and artificial sources	4	Research Assessment
Use computer software applications to simulate effects of art media.	4	e-Assessment Portfolio Strategy Project-based presentation

WEEK 4

Learning Indicator: *Research into recipes for making art media from natural and artificial sources*

FOCAL AREA:

1. NATURAL AND ARTIFICIAL SOURCES TO OBTAIN ART MEDIA
2. HOW TO USE THESE NATURAL AND ARTIFICIAL SOURCES AS ART MEDIA

NATURAL AND ARTIFICIAL SOURCES OF ART MEDIA

Art media refers to the materials and tools artists use to create their work. These materials can come from natural or artificial (man-made) sources. Understanding where art media comes from helps artists make better choices about materials and appreciate the link between art, nature, and industry.

1. Natural Sources of Art Media

Natural sources are materials that come directly from nature, with little or no chemical processing.

Examples of Natural Art Media

Natural Source	Art Media Derived	Example of usage
Plants	Dyes, inks, paper pulp	Ink from cocoa pods, dyes from indigo leaves
Minerals	Pigments, clay, chalk	Red and yellow ochres used in painting
Animals	Brushes, glue, parchment	Goat hair for brushes, bones for glue
Earth	Clay, sand, stone	Clay for pottery, stone for sculpture
Trees	Wood, bark, charcoal	Wood carving, charcoal for drawing

Advantages of Natural Media

- Eco-friendly and biodegradable
- Often culturally significant (e.g., kente dyeing)
- Affordable and locally available

2. Artificial (Man-made) Sources of Art Media

Artificial sources are materials that have been chemically processed or manufactured by humans, often using synthetic materials.

Examples of Artificial Art Media

Artificial Source	Art Media Derived	Example of usage
Factories	Acrylic paints, synthetic brushes	Bright and long-lasting paints
Plastic materials	Markers, stencils, drawing tools	Durable and easy to clean
Industrial chemicals	Synthetic dyes, resins, glues	Used in modern textile design and mixed media
Processed paper	Art paper, canvas	Used for sketching, painting, and printing

Advantages of Artificial Media

- More variety in colour and texture
- Longer shelf life and resistance to fading
- Suitable for mass production and modern art styles

Comparison Table

Feature	Natural Media	Artificial Media
Source	Nature (plants, animals, earth)	Human-made or processed
Cost	Often cheaper	Sometimes more expensive
Durability	Can fade or decay	More durable
Environmental impact	Environmentally friendly	May cause pollution

Summary

Both natural and artificial sources of art media are important to artists. In Ghana, many traditional art forms like *adinkra and other forms of fabric printing*, *kente weaving*, *wood carving, and pot making* rely on natural materials, while modern art practices use artificial media for convenience and creativity. A good artist understands how to use both types wisely to express ideas, preserve culture, and innovate in the art world.

How to Use Natural and Artificial Sources as Art Media

Art media are the materials used to create artwork. These can come from natural sources (from nature) or artificial sources (man-made). Learning how to use both types helps artists create beautiful and meaningful art while understanding how to work with their environment and available resources.

1. **How to Use Natural Sources as Art Media**

   Natural art media come directly from nature, such as plants, animals, rocks, soil, trees, etc.

Practical scenarios for producing natural pigments and dyes

Natural material & Ghana location	Colour	Type	Scenario and steps
Indigo leaves – Northern Ghana	Blue-Deep	Dye	**Producing blue dye for cotton** **Steps:** 1. Harvest fresh indigo leaves. 2. Wash and crush them. 3. Soak/ferment in water for several hours. 4. Strain the liquid. 5. Aerate by stirring or pouring between containers. 6. Allow the pigment to settle. 7. Collect the blue sediment and dry it, or use the dye bath directly.
Shea bark/roots or shea nut shells – Northern Ghana	Dark -Brown	Dye/ pigment	**Producing an earthy brown for cloth/paper** **Steps:** 1. Collect clean bark or shells. 2. Break into small pieces. 3. Boil in water for 1–2 hours. 4. Strain the extract. 5. Concentrate by further simmering. 6. Use the liquid as a dye or dry the concentrated residue into a pigment-like colourant.
Red lateritic earth – Middle Belt and Northern Ghana	Red, Ochre, Orange-red	Pigment	**Making an earth pigment for painting** **Steps:** 1. Collect strongly coloured lateritic soil. 2. Remove stones and organic matter. 3. Dry thoroughly. 4. Crush and grind finely. 5. Sieve to obtain a uniform powder. 6. Mix with Gum Arabic, starch or another suitable binder for painting.
Charcoal from hardwood. Throughout Ghana	Black-Grey	Pigment	**Producing black drawing pigment** **Steps:** 1. Collect clean charcoal from untreated wood. 2. Crush it. 3. Grind into a fine powder. 4. Sieve the powder. 5. Mix with Gum Arabic or starch paste. 6. Adjust with water to produce ink or paint.

Natural material & Ghana location	Colour	Type	Scenario and steps
Mango bark/leaves – widespread throughout Ghana	Yellow, Tan–Brown	Dye	**Dyeing cotton/paper with mango plant material** **Steps:** 1. Collect fallen leaves or small quantities of bark. 2. Wash and chop into pieces. 3. Boil in water. 4. Strain the coloured extract. 5. Add the pre-wetted fabric or paper. 6. Simmer gently while stirring. 7. Remove, rinse and dry.
Mahogany bark – Throughout Ghana	Reddish-Brown	Dye	**Producing a warm brown dye for textiles** **Steps:** 1. Collect bark (preferably from fallen/pruned material). 2. Cut into small pieces. 3. Soak overnight. 4. Boil the material. 5. Strain the extract. 6. Place cotton in the dye bath. 7. Heat and stir periodically. 8. Remove and dry.
Turmeric – cultivated in parts of Ghana.	Bright Yellow-Orange	Dye/ pigment	**Creating a yellow colourant** **Steps:** 1. Harvest turmeric rhizomes. 2. Wash and slice. 3. Crush or grate. 4. Boil in water and strain for a dye. 5. Alternatively, dry and grind it into powder. 6. Mix the powder with a binder for pigment-based painting.
Hibiscus (sobolo) calyces – widely available in Ghana	Red, Burgundy, Purple	Dye	**Producing a red-purple natural dye** **Steps:** 1. Collect dried hibiscus calyces. 2. Wash them. 3. Soak in water. 4. Heat gently to extract the colour. 5. Strain the liquid. 6. Concentrate the extract by simmering. 7. Use it to dye paper or suitable natural fibres.

Natural material & Ghana location	Colour	Type	Scenario and steps
Kola nut husks – Middle Belt and Northern Ghana	Brown, Reddish-Brown	Dye	**Turning agricultural residue into a textile dye.** **Steps:** 1. Collect discarded kola nut husks. 2. Wash and cut them. 3. Dry and crush. 4. Boil in water for extraction. 5. Strain the liquid. 6. Concentrate the extract. 7. Immerse cotton or paper in the dye bath. 8. Dry and repeat the process for a deeper colour.
Teak leaves – Throughout Ghana	Yellow, Ochre, Brown	Dye	Making dye from fallen leaves. **Steps:** 1. Collect fallen or mature teak leaves. 2. Wash and tear them into pieces. 3. Soak overnight. 4. Boil the leaves. 5. Strain the extract. 6. Place cotton or paper in the solution. 7. Heat gently and stir. 8. Remove, rinse and dry.

Distinction between Pigments and Dye Making Processes

1. **Pigment production:** Collect - clean - dry - crush - grind - sieve - mix with binder

   Examples: lateritic earth, charcoal, turmeric powder.

2. **Dye production:** Collect - clean - cut/crush - soak/boil/ferment - strain - concentrate - dye material - dry

   Examples: indigo, mango bark, mahogany bark, hibiscus, kola husks and teak leaves.

Practical Material-Specific and Process-Oriented for Handmade Paper, Cords, Textiles and Fibres

Natural materials	Product	Scenario and main steps
Plantain pseudostem	**Paper**	**Convert discarded plantain stems into handmade paper** **Steps:** 1. Cut the outer layers of the pseudostem. 2. Wash and chop into small pieces. 3. Soak or boil to soften. 4. Pound or blend into pulp. 5. Mix pulp with water. 6. Dip a screen into the pulp and lift a thin layer. 7. Press out excess water. 8. Dry the sheet.
Banana pseudostem	**Fibre**	**Extracting usable fibre from banana stems for craft production** **Steps:** 1. Harvest discarded pseudostems. 2. Split into strips. 3. Scrape away the soft tissue. 4. Separate the long fibres. 5. Wash and dry them. 6. Comb and align the fibres. 7. Twist or weave them into a usable fibre bundle.
Pineapple leaves	**Fibre/ thread**	**Producing fibre from pineapple leaves for weaving or craft.** **Steps:** 1. Collect mature leaves after harvesting. 2. Wash them. 3. Scrape/crush the leaves to loosen the fibres. 4. Pull out the fibres. 5. Wash thoroughly. 6. Dry in the sun. 7. Comb and twist into strands.
Coconut Husk	**Rope**	**Making coarse rope from coconut husk** **Steps:** 1. Collect mature coconut husks. 2. Soak them in water to soften. 3. Beat or pound the husks. 4. Separate the fibres. 5. Dry them partially. 6. Align several fibres. 7. Twist them together. 8. Combine several twisted strands to form a stronger rope.

Natural materials	Product	Scenario and main steps
Kenaf	**Rope/fibre**	**Producing strong plant fibre from kenaf stems.** **Steps:** 1. Harvest mature stems. 2. Remove leaves and branches. 3. Soak the stems in water to loosen the fibres. 4. Strip away the woody core. 5. Wash the fibres. 6. Dry them. 7. Comb and align. 8. Twist into cord or weave into material.
Ramie	**Fabric/ fibre**	**Preparing bast fibre for textile experimentation** **Steps:** 1. Harvest mature stems. 2. Remove the leaves. 3. Ret or scrape the stems. 4. Strip the bark to obtain fibres. 5. Wash and dry the fibres. 6. Separate and straighten them. 7. Spin into yarn. 8. Weave the yarn into fabric.
Cotton	**Fabric**	**Taking locally grown cotton from fibre to woven fabric** **Steps:** 1. Harvest mature cotton bolls. 2. Remove seeds from the lint. 3. Clean and fluff the cotton. 4. Card and align the fibres. 5. Twist/spin them into yarn. 6. Prepare warp and weft. 7. Weave on a loom. 8. Finish and dry the fabric.
Raffia palm leaves	Rope/fabric	**Producing a woven surface from raffia** **Steps:** 1. Harvest mature raffia leaves. 2. Split the leaves into strips. 3. Remove unwanted portions. 4. Dry or partially dry the strips. 5. Soften them before weaving. 6. Arrange strips as warp and weft. 7. Weave or plait. 8. Trim and finish the edges.

Natural materials	Product	Scenario and main steps
Clay/Kaolin	**Clay bodies**	**Pottery/Sculpture material** **Steps:** 1. Collect earth. 2. Crush rocks and earth. 3. Sieve to remove impurities. 4. Soak to break down lumps. 5. Refine/Knead to remove trapped air. 6. Apply/Cast/Mould/model. 7. Dry to remove moisture. 8. Fire for strength.
Sisal leaves	**Rope/fibre**	**Making strong cords from sisal leaves** **Steps:** 1. Harvest mature leaves. 2. Remove the sharp edges. 3. Scrape or crush the leaves. 4. Extract the long fibres. 5. Wash and dry them. 6. Comb and align the fibres. 7. Twist them into strands. 8. Ply several strands into rope.
Bamboo	**Paper/fibre**	**Producing handmade paper from bamboo** **Steps:** 1. Select mature bamboo. 2. Cut into sections. 3. Split and remove the hard outer layer. 4. Chop the inner material. 5. Soak and boil to soften it. 6. Pound or blend into pulp. 7. Form sheets using a mould and deckle. 8. Press, peel off and dry the sheets.

Useful Process Sequence tips according to how materials are transformed

1. **Paper**: plantain pseudostem/bamboo - cut - soften - pulp - sheet formation - pressing - drying
2. **Fibre**: banana pseudostem/pineapple/cotton/sisal - extract - clean - dry - comb - align
3. **Rope**: coconut/kenaf/sisal - extract - dry - twist - ply - finish
4. **Fabric**: cotton/ramie/raffia - extract - prepare fibre - spin or strip - weave – finish
5. **Earth: clay/kaolin/laterite - c**ollect - crush - sieve - soak – knead/refine – model/mould/cast - dry - fire

Note

Sustainable favourites: plantain pseudostem, pineapple leaves, coconut husk, raffia, cotton, bamboo, banana pseudostem, sisal, kenaf, and agricultural waste, because they enable investigations into local materials, sustainability, and indigenous technologies for art and design materials.

Creating Art Media from Artificial Materials

Artificial material/source	Media to make	Scenario and main steps
Waste paper and cardboard – schools, offices, shops	**Paper pulp / handmade paper**	**Textured drawing paper from discarded paper** **Steps:** 1. Collect waste paper. 2. Remove staples and plastics. 3. Tear into pieces. 4. Soak in water. 5. Pulp by pounding or blending. 6. Add colour or fibres if required. 7. Form sheets with a screen. 8. Press and dry.
Plastic bags and wrappers – markets and households	**Plastic fibre / woven sheet**	**Turn discarded plastic into an art surface** **Steps:** 1. Collect and clean plastics. 2. Cut into strips. 3. Sort by colour and thickness. 4. Twist or plait strips. 5. Weave or knot them together. 6. Heat-press only with appropriate equipment and ventilation where suitable. 7. Trim and finish.

Artificial material/source	Media to make	Scenario and main steps
Old newspapers and magazines	**Paper strips/ Paper-mâché medium**	**Creating a moulded sculptural forms from old newspapers** **Steps:** 1. Tear paper into strips. 2. Prepare starch or suitable adhesive paste. 3. Build an armature. 4. Dip strips into adhesive. 5. Layer over the armature. 6. Allow to dry completely. 7. Sand or refine. 8. Paint or seal.
Sawdust from carpentry workshops	**Composite modelling medium**	Lightweight material for support and sculpture **Steps:** 1. Collect clean sawdust. 2. Remove contaminants. 3. Mix with starch, glue or another suitable binder. 4. Add water gradually. 5. Form or press into a mould or flat surface. 6. Compact the mixture. 7. Dry thoroughly. 8. Sand and finish.
Eggshell waste – homes, bakeries and food vendors	**Textured art medium**	Granular surface for mixed-media artwork **Steps:** 1. Collect eggshells. 2. Wash and sterilise appropriately. 3. Dry completely. 4. Crush into different particle sizes. 5. Apply adhesive to a prepared surface. 6. Sprinkle or arrange the shell particles. 7. Allow to dry. 8. Seal and colour if desired.

Artificial material/source	Media to make	Scenario and main steps
Used fabric/clothing – households and second-hand markets	**Fabric collage/ textile fibre**	Collaging discarded clothing into a new art surface **Steps:** 1. Collect unwanted fabric/clothing. 2. Wash and dry it. 3. Sort according to colour, texture and pattern. 4. Cut or tear into pieces. 5. Arrange a composition. 6. Stitch, glue or weave the pieces together. 7. Add embroidery, needlework or other media. 8. Mount or finish the work.
Aluminium drink cans – Ghanaian homes and beverage outlets	**Metal sheet/ relief medium**	Artworks from discarded cans **Steps:** 1. Collect and wash cans. 2. Cut them open safely. 3. Flatten the sheets. 4. Transfer a design. 5. Emboss or incise the surface. 6. Cut and assemble sections. 7. Join them mechanically or with an appropriate adhesive. 8. Mount and finish.
Cement and fine sand – construction sites	**Modelling/ casting medium**	Sculpture with cement-based composite **Steps:** 1. Measure cement and sand. 2. Mix thoroughly. 3. Add water gradually. 4. Prepare a mould or armature. 5. Fill and compact the mixture or build on armature slowly. 6. Allow it to set. 7. Remove from the mould. 8. Cure and finish the surface.

Artificial material/source	Media to make	Scenario and main steps
Plaster of Paris – art and construction suppliers	**Casting medium**	Casting a relief, mask and small cast object **Steps:** 1. Prepare the mould. 2. Measure plaster and water. 3. Mix to a smooth consistency. 4. Pour into the mould. 5. Tap gently to release trapped air. 6. Allow it to set. 7. Remove carefully. 8. Chisel off unwanted parts, sandpaper and paint the cast.
Clay substitute from paper pulp + adhesive	**Modelling medium**	Developing a lightweight alternative to conventional modelling clay **Steps:** 1. Produce fine paper pulp. 2. Remove excess water. 3. Add adhesive and a small amount of filler. 4. Knead into a workable mass. 5. Test its plasticity. 6. Model the form. 7. Allow it to dry completely. 8. Sand, prime and decorate.
Colouring and Painting	**Assorted Pigments**	Acrylics, watercolour, pastels, crayons, tempera, emulsion, oil paints, enamels, etc.

Alternative Classifications

1. **Reconstituted media**
   - **a.** Waste paper - pulp - handmade paper
   - **b.** Sawdust - binder - composite
   - **c.** Paper – pulp/strips - modelling medium
2. **Recycled media**
   - **a.** Plastic - strips - woven/plaited surface
   - **b.** Aluminium cans - sheets - relief
   - **c.** Old fabric - pieces - collage/textile (Nsasaawa)
3. **Synthetic or manufactured media**
   - **a.** Plaster - mixture - cast
   - **b.** Cement - composite - sculpture

c. Adhesive & fibres - modelling/composite medium

Creating 3D materials and tools from Natural Sources

Natural Material	How to Use It (Learners are expected to explore more uses)	Examples in Art in Ghana
Clay	Collect from riverbanks, knead and shape with water, then bake or fire to harden	Pottery in Pankrono, Kwahu Mpraeso, Vume and Sirigu
Charcoal	Burn wood, cool and break into sticks, used for drawing and shading	Sketching and preliminary drawings
Wood	Carve into shapes using tools like chisels or knives	Wood sculpture and stool carving
Stone	Carve or chip using hammers and chisels	Traditional stone carvings in northern Ghana
Animal Fur/ Hair	Use to make paintbrushes or decorative items	Goat hair brushes, fly whisks, or traditional fans

Notes on using Natural Media

- Always collect materials responsibly (avoid harming the environment).
- Prepare and test materials before using them in the final work.
- Combine materials for creative results (e.g., wood and natural dyes).

2. How to Use Artificial Sources as Art Media

Artificial art media are made through industrial or chemical processes. They are often easier to use and come in many colours and forms.

Common Artificial Media and their uses

Artificial Material	How to Use It (Learners are expected to explore more uses)	Examples
Acrylic Paint	Squeeze onto palette, mix with water or medium, apply with brushes	Used in canvas painting
Synthetic Brushes	Dip into paint or ink and apply to surfaces	Used in the classroom and commercial art
Markers and Crayons	Draw directly on paper, fabric, or other surfaces	Poster design and colouring in making pictures
Plastic Stencils	Place on a surface, paint or spray over the design	Lettering and pattern-making
Canvas or Processed Paper	Use as a surface for painting or drawing	Used in painting, posters, printing etc
Glue and Synthetic Resin	Use to stick pieces together in collage or mixed media	Paper collage, craft projects etc

Tips for Using Artificial Media

- Keep tools clean for reuse.
- Use protective gear (e.g., aprons, gloves) when working with chemicals.
- Store materials properly to prevent damage or accidents.

Combining Natural and Artificial Media

Many modern Ghanaian artists mix natural and artificial materials for unique effects. For example:

- Using acrylic paint on bark cloth
- Combining plant dyes with synthetic fabrics
- Decorating wood carvings with poster colours

Summary

Understanding how to use both natural and artificial sources allow artists to be creative, resourceful, and respectful of their environment. Whether you are making traditional pottery or a modern painting, choosing the right material for your message and style is an important part of being a skilled artist.

Learning Task

Task 1: Mini Project for Week 4: Natural Media 3D Art for Community Solutions

Duration: 1 Week (*Can be continued outside class hours*)

Project Brief/Theme: "Natural Solutions: Art Materials from the Community for Change"

This project challenges learners to:

1. create art materials from natural and artificial sources in their environment by applying multiple techniques to develop a 3D artwork to address a community issue.
2. document your material processing and creative decisions.

Suggested Art Forms and Community Solutions (*Groups are to choose any one of the Artforms. Teachers to ensure that, by the groupings, all the suggested Artforms will be taken*)

1. **Woven Basketry Installation**

   Community Problem: Plastic waste management and littering.

   Solution Approach: Create functional waste collection baskets with educational elements

   - Use locally harvested reeds, grasses, and palm fronds as primary materials.

- Incorporate processed natural dyes for colour coding different waste types.
- Design baskets with specific shapes indicating their intended waste category.
- Add woven symbols or patterns that communicate recycling messages.
- Install in public spaces with high foot traffic and waste generation.

2. **Clay Relief Mural**

Community Problem: Water conservation awareness

Solution Approach: Create an interactive relief mural showing water usage cycles.

- Use locally sourced clays of different natural colours.
- Process clay with sand and fibre additives for outdoor durability.
- Use natural pigments to highlight key educational elements.
- Install near community water collection points.

3. **Mixed Media Sculpture**

Community Problem: Food security and traditional farming knowledge

Solution Approach: Create a scarecrow/ sculpture to protect local food plants.

- Use an armature of bamboo or branches for structural support.
- Apply processed clay to create plant forms
- Incorporate actual seeds preserved in natural resins.
- Use natural pigments to create planting calendar information.
- Place at a community garden or market location.

4. **Fibre Art Signage**

Community Problem: Lack of directional information in community spaces

Solution Approach: Create a durable, artistic wayfinding system.

- Use woven sisal, jute or local fibres for base construction.
- Apply natural dyes from local plants for colour coding.
- Incorporate universal symbols carved from calabash or wood.
- Design weather-resistant construction using traditional techniques.
- Create a modular system that can be expanded as needed.
- Install at key community junctions and gathering spaces.

5. **Assemblage Lighting**

Community Problem: Limited electricity in public gathering spaces

Solution Approach: Create solar-powered artistic lighting using recycled materials.

- Construct forms using locally harvested gourds or calabashes.

- Apply natural pigments and dyes for decorative elements.
- Incorporate small solar collectors in the design.
- Use natural fibre techniques for suspension systems.
- Design light patterns that illuminate community gathering spaces.
- Install in markets, meeting areas, or educational spaces.

Project Structure

Phase 1: Creating Own Art Media From Natural and Artificial Recipes from the Environment To Solve Societal Issues

1. Brief overview of natural art media possibilities:
   - Dry media sources (charcoal, clay, shells, seeds)
   - Wet media sources (plant extracts, clay slips, natural dyes)
   - Binding materials (waxes, natural gums, adhesives)

2. developing a colour chart using only naturally occurring materials from different ecological regions of Ghana. Each group must;
   i. collect one material;
   ii. document its location
   iii. extract its colour
   iv. produce a pigment or dye to save; and
   v. organise results into charts as poster presentations

Phase 2: Material Collection and Processing

1. create supports, grounds, parchments and objects from natural materials from different parts of Ghana. Each group must;
   i. collect one material;
   ii. document its location
   iii. use its fibres and substances
   iv. produce a support or ground; and
   v. apply pigments/dyes in activity 1 to their support, e.g. fibre, fabric, paper or pottery;

   In a sequence of research - collection - processing - experimentation - application - documentation

2. Combine natural and artificial media in the process.

Phase 3: 3D Artwork Creation

Create your 3D artwork using processed natural media and multiple techniques appropriate to your chosen art form to address a community problem.

Your artwork must

- address the identified community problem.
- incorporate at least three different natural media you have identified and processed.
- demonstrate multiple techniques in application.
- include structural elements that enhance the message.

Phase 4: Documentation and Presentation

Create a presentation package for your artwork that includes materials documentation, techniques documentation, and a community impact statement.

Assessment Criteria (30 Marks)

Criteria (10 marks)	Excellent (8-10)	Very good) (5-7	Satisfactory (3-4)	Needs improvement (1-2)
Material Creation	Any 4 correct examples; Document the materials used in your artwork, including types of paint, canvas, and any mixed media. Outline the techniques employed in your creative process, such as layering, glazing, or digital manipulation. Include a community impact statement that highlights how your artwork engages with local issues or themes. Provide a visual presentation of your artwork alongside the documentation to enhance understanding and appreciation.	Any 3 correct examples; Document the materials used in your artwork, including types of paint, canvas, and any mixed media. Outline the techniques employed in your creative process, such as layering, glazing, or digital manipulation. Include a community impact statement that highlights how your artwork engages with local issues or themes.	Any 2 correct examples; Document the materials used in your artwork, including types of paint, canvas, and any mixed media. Outline the techniques employed in your creative process, such as layering, glazing, or digital manipulation.	Only 1 correct example; Document the materials used in your artwork, including types of paint, canvas, and any mixed media.

Criteria (10 marks)	Excellent (8-10)	Very good) (5-7	Satisfactory (3-4)	Needs improvement (1-2)
Technical Application	Any 4 correct examples Include high-resolution images of your artwork along with descriptions of the materials used. Document the techniques employed in creating each piece, such as layering, glazing, or mixed media.	Any 3 correct examples Include high-resolution images of your artwork along with descriptions of the materials used.	Any 2 correct examples Include high-resolution images of your artwork along with descriptions of the materials used.	Only 1 correct example Include high-resolution images of your artwork along with descriptions of the materials used.
	Provide a statement on how your artwork engages with the community, highlighting any collaborative projects. Incorporate feedback from community members or art critics to showcase the impact of your work.	Document the techniques employed in creating each piece, such as layering, glazing, or mixed media. Provide a statement on how your artwork engages with the community, highlighting any collaborative projects.	Document the techniques employed in creating each piece, such as layering, glazing, or mixed media.	
Community Solution	Any 4 correct examples; Artwork documentation showcasing the materials used, including types of paint and canvas. Techniques documentation detailing the methods employed in creating the artwork, such as layering and texture application. A community impact statement highlighting how the artwork addresses local issues, such as promoting environmental awareness.	Any 3 correct examples; Artwork documentation showcasing the materials used, including types of paint and canvas. Techniques documentation detailing the methods employed in creating the artwork, such as layering and texture application.	Any 2 correct examples; Artwork documentation showcasing the materials used, including types of paint and canvas. Techniques documentation detailing the methods employed in creating the artwork, such as layering and texture application.	Only 1 correct example; Artwork documentation showcasing the materials used, including types of paint and canvas.

Criteria (10 marks)	Excellent (8–10)	Very good) (5–7	Satisfactory (3–4)	Needs improvement (1–2)
	Visual aids like photographs or sketches that illustrate the process and final presentation of the artwork.	A community impact statement highlighting how the artwork addresses local issues, such as promoting environmental awareness.		

Differentiation Strategies

- Provide pre-processed materials for those with physical limitations.
- Allow for collaborative work on larger pieces.
- Offer templates for documentation.
- Provide visual examples of natural media techniques.
- Allow for verbal presentations rather than written documentation if needed.

PEDAGOGICAL EXEMPLARS

- Managing Talk for Learning: Through question and answers, classify natural and artificial materials found in the environment into wet and dry. E.g. assorted colours of clay, charcoal, shells, leaves, seeds, etc.
- Group Work/ Collaborative Learning/Problem-Based Learning: In mixed ability groups analyse how you will process the identified materials in the natural environment to create dry media for making art.
- Experiential Learning; Project-Based Learning: In convenient groups gather natural materials in your environment and process them to create dry media for making art. Try to select binders (wax, glue, etc), colour fast chemicals to prepare your media.

KEY ASSESSMENT

Level 4: Group Project

Question

Compare natural and artificial art media by creating a detailed comparison table and writing a short critical analysis.

1. Create a comparison table showing 3 natural and 3 artificial art materials, their sources, advantages, disadvantages, and applications.
2. In a short essay/presentation (200 words), explain how these materials affect artistic expression and discuss their cultural significance in art in Ghana.

Hint

Assign Group Project to learners and give them reasonable time to complete it. Use the SS App to generate the project as well as the rubric. Learners' projects should be marked immediately and scores entered into the STP.

PLC SESSION 4

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous session, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand.
   b. identify three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q).
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).

Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Use your app to plan and administer the mode of assessment for the Student Assessment Portal (SAP)
   a. The key assessment for the week is ***group project***. Chat with your app to plan this assessment by reviewing or developing the assessment items/tasks and marking schemes/rubrics for the project (NTS 3k-3q).

10 minutes	Content Exploration

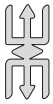
5. As a subject group, select one problem or topic/idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then

a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through the problem individually for 3–4 minutes

c. the group then works through it together the problem, step by step

d. highlight the most common errors made at each step (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 5

Learning Indicator: *Use computer software applications to simulate effects of art media*

FOCAL AREA: COMPUTER-AIDED DESIGNS

Understanding Computer-Aided Designs and its application

UNDERSTANDING COMPUTER-AIDED DESIGN (CAD)

Introduction

Computer-Aided Design (CAD) application refers to the use of computer software to create accurate drawings, designs, and models for artistic or industrial purposes. In art, architecture, engineering, fashion, and product design, CAD helps users turn ideas into precise visual plans.

What is CAD?

CAD stands for Computer-Aided Design.

- It is used to create, modify, analyse, and improve designs.
- It replaces hand-drawing techniques with digital tools that are faster, more accurate, and easier to edit.

Importance of CAD for Art and Design in Ghana

- Helps students produce professional-quality designs.
- Encourages creativity using modern technology.
- Prepares learners for careers in:
  - **a.** Architecture
  - **b.** Graphic Design
  - **c.** Engineering and Technical Drawing
  - **d.** Interior and Fashion Design
- Widely used in Ghana's building and manufacturing industries.

Common CAD Software Used in Schools and Industry

Software	Description	Common Uses
AutoCAD	One of the most popular CAD programmes	Architectural and engineering drawings
SketchUp	Simple 3D modelling software	Interior design, 3D modelling, landscaping

Software	Description	Common Uses
TinkerCAD (Free)	Beginner-friendly, online tool	Basic 3D design and printing
Fusion 360	3D CAD for engineering and product design	Used in technical fields
CorelDRAW	Vector-based design software	Used in graphic and textile design

What CAD can be used for in Art and Design?

Application	Description
2D Drawing	Create flat designs like logos, floor plans, and schematics.
3D Modelling	Build objects with height, width, and depth (e.g., furniture, buildings).
Technical Drawing	Produce detailed plans for construction or manufacturing.
Fashion and Textile Design	Design patterns, garments, and layouts digitally.
Product Design	Create models of products before they are built or printed.

Basic Features of CAD Software

- Drawing tools (lines, shapes, curves)
- Measuring tools for accuracy
- Layers for organising different parts of a design
- Zoom and pan for close-up detailing
- Editing tools (erase, rotate, copy, scale)
- 3D tools to add depth, texture, and movement

Examples in the Ghanaian Context

- Architecture: Designing homes and public buildings in major cities and towns in Ghana.
- Fashion Design: Creating digital textile patterns or outfit layouts.
- Technical Drawing: Used for making designs in visual arts and applied design subjects.
- Product Design: Modelling tools, furniture, or crafts before physical production.

Summary

Understanding CAD gives learners the digital skills needed in modern art and design industries. It combines creativity with technology and helps learners bring their ideas to

life with accuracy and efficiency. In the areas of drawing a logo, designing clothing, or planning a building, CAD is a powerful tool for the 21st-century artist or designer.

Using Computer Software Applications to Simulate Effects of Art Media

In today's digital world, artists do not only use physical tools like paintbrushes and pencils they also use computer software to create and experiment with art. These programs can simulate (mimic) traditional art materials like watercolour, charcoal, oil paint, and more. Learning how to use these tools helps learners combine traditional skills with modern technology. To simulate art media means to use digital tools to imitate the look, feel, and behaviour of real-world art material's such as:

- Paint
- Ink
- Pastels
- Chalk
- Pencils
- Brushes

For example, a digital paintbrush software can make strokes that look like real oil paint or watercolour on a canvas. This helps the learner to:

- experiment how to apply colours without wasting physical materials.
- develops digital art skills for various careers in artmaking, e.g. graphic design, painting, pattern making, animation, and advertising.
- develop creativity and innovation in the making of artworks in modern times.

Common Computer Software for Simulating Art Media

Software	Key Features	Ghanaian Application
Adobe Photoshop	Digital painting, layering, brush effects	Used by local graphic designers and photographers and digital painters
Corel Painter	Realistic painting tools (oil, watercolour, etc.)	Used in digital painting, cartooning and illustration
Krita (Free)	Open-source painting tool with natural brushes	Suitable for graphic designers and photographers and digital painters
Paint Tool SAI	Lightweight and great for smooth drawing	Used in comics and animation
Autodesk SketchBook (Free)	User-friendly, good for sketching and concept art	used for digital drawing and designing
Procreate (iPad only)	Touch-based painting with realistic textures	Suitable for graphic designers, digital painters and designers

Examples of Simulated Art Media in Use

Art Medium	Simulated Tool in Software	Description
Pencil	Pencil brush tool	For sketching and shading digitally
Watercolour	Watercolour brush	Blends and bleeds like real paint
Oil Paint	Oil brush	Thick, textured strokes with colour mixing
Ink	Calligraphy or ink pen tool	For making drawings, calligraphy and illustrations
Pastels/ Charcoal	Smudge or chalk brushes	Used for textured drawing or portraits

Basic Steps to Simulate Art Media Using Software

- Open the software and start a new project (canvas).
- Select a brush or tool that matches your chosen medium (e.g., watercolour, pencil).
- Adjust settings like opacity, size, and pressure to control how the brush behaves.
- Choose colours from the colour palette.
- Start drawing or painting on the digital canvas using a mouse or graphic tablet.
- Use layers to separate parts of your artwork and make editing easier.
- Save and export your artwork when done.

Tools You May Need

- A computer or tablet
- A mouse or graphic tablet (for better drawing control)
- Installed art software (e.g., Krita or Adobe Photoshop)
- Internet access (optional for tutorials and software downloads)

Learning Task

Mini Project for Week 5: Creating Simulated Effects of Art Media with Computer Applications

Duration: One Week (*Can be continued outside class hours*)

Project Brief/Theme: "Digital Natural Solutions: Art for Community Change"

This project challenges learners to:

- Use computer software applications to simulate natural and artificial art media effects.
- Apply multiple digital techniques to develop a 3D virtual artwork addressing a community issue.

- Document your digital process and creative decisions.

Suggested Digital Art Approaches and Community Solutions

(Groups to choose one approach. Teachers to ensure all approaches are covered)

1. **Virtual Basketry Visualization**

Community Problem: Plastic waste management and littering **Solution Approach** Create digital models of functional waste collection systems

- Use 3D modelling software to simulate woven reed, grass, and palm textures
- Apply digital colour filters to simulate natural dye effects for waste type coding
- Design virtual basket forms with specific shapes for different waste categories
- Create digital texture maps of educational symbols and patterns
- Generate visualization of installation in public spaces with high foot traffic

2. **Digital Clay Relief Simulation**

Community Problem: Water conservation awareness

Solution Approach: Create interactive digital relief mural showing water usage cycles.

- Use digital sculpting tools to simulate clay textures and surfaces.
- Apply digital material effects mimicking sand and fibre additives.
- Design virtual relief elements showing proper water usage techniques.
- Create animated components demonstrating water-saving methods.
- Apply digital colour effects simulating natural pigments.
- Render visualization of installation near community water points.

3. **Virtual Mixed Media Construction**

Community Problem: Food security and traditional farming knowledge

Solution Approach: Create digital informational display about local food plants.

- Use 3D modelling to simulate bamboo and branch structural elements.
- Apply digital clay textures to create virtual plant forms.
- Incorporate high-resolution seed images with digital preservation effects.
- Create digital calendar interface with natural pigment aesthetics.
- Design virtual seed-sharing component.
- Render visualisation in community garden or market setting.

4. **Digital Fibre Art Signage System**

Community Problem: Lack of directional information in community spaces

Solution Approach: Create virtual wayfinding system with traditional material aesthetics.

- Simulate woven sisal, jute or local fibre textures using digital tools.
- Apply digital colour effects mimicking natural plant dyes.
- Create virtual symbols inspired by calabash or wood carving.
- Design weather effects to demonstrate durability.
- Develop modular digital system that shows expansion options.
- Render visualisation at key community locations.

5. **Virtual Solar Lighting Design**

Community Problem: Limited electricity in public gathering spaces

Solution Approach: Create digital models of solar-powered artistic lighting.

- Design 3D models simulating gourd or calabash forms.
- Apply digital texture and colour effects mimicking natural pigments.
- Incorporate virtual solar collector components.
- Simulate natural fibre suspension systems.
- Create digital light effects showing illumination patterns.
- Render visualisation in market, meeting area, or educational space.

Project Structure

Phase 1: Digital Media and Community Issues (1 lesson)

1. Brief overview of digital software applications for art media simulation:
   - 3D modelling software (Blender, SketchUp, TinkerCAD)
   - Digital painting applications (GIMP, Krita, Photoshop)
   - Texture generation tools (Substance Painter, online alternatives)
   - Animation and simulation options
2. Select one of the suggested digital approaches and community problems

Phase 2: Digital Material Research and Testing (1 lesson)

1. Research natural materials relevant to your chosen approach
2. Test digital tools and effects that can simulate these materials:
   - Create digital texture libraries of natural materials.
   - Experiment with digital brushes that mimic natural media.
   - Test colour palettes based on natural pigments.
   - Document successful digital simulation techniques.

Phase 3: Digital Artwork Creation (2-3 lessons)

Create your digital 3D artwork using appropriate software applications.

Your digital artwork must

- Clearly address the identified community problem.
- Simulate at least three different natural media effects.
- Demonstrate multiple digital techniques in application.
- Include structural elements that enhance the message.
- Show how the digital design could be implemented in real space.

Phase 4: Documentation and Presentation (One lesson)

Create a presentation package for your digital artwork that includes:

1. **Digital Materials Documentation**
   - Screenshots of digital material creation process
   - Explanation of software tools used to simulate natural media
   - Comparison between digital effects and actual natural materials
2. **Technical Documentation**
   - Digital methods used to create the 3D form
   - Software techniques for simulating different media effects
   - Process of virtual construction and composition
3. **Community Impact Statement**
   - Description of the community problem addressed
   - How your digital artwork proposes a solution or raises awareness
   - Plan for potential real-world implementation

Assessment Criteria (30 Marks)

Criteria (20 marks)	Excellent (8-10)	Very good (5-7)	Satisfactory (3-4)	Needs improvement (1-2)
Digital Material Simulation (5 marks)	Any 4 correct examples; Blender: A powerful open-source 3D creation suite. Autodesk Maya: Industry-standard software for 3D modelling and animation.	Any 3 correct examples; Blender: A powerful open-source 3D creation suite. Autodesk Maya: Industry-standard software for 3D modelling and animation.	Any 2 correct examples; Blender: A powerful open-source 3D creation suite. Autodesk Maya: Industry-standard software for 3D modelling and animation.	Any 1 correct example; Blender: A powerful open-source 3D creation suite.

Criteria (20 marks)	Excellent (8-10)	Very good (5-7)	Satisfactory (3-4)	Needs improvement (1-2)
	Adobe Dimension: Tool for creating photorealistic 3D images. Cinema 4D: User-friendly software for motion graphics and 3D design.	Adobe Dimension: Tool for creating photorealistic 3D images.		
Technical Application (5 marks)	Any 4 correct examples; Using Blender for 3D modelling and animation. Creating textures in Adobe Substance Painter. Rendering scenes with Autodesk Maya. Compositing final artwork in Adobe After Effects.	Any 3 correct examples; Using Blender for 3D modelling and animation. Creating textures in Adobe Substance Painter. Rendering scenes with Autodesk Maya.	Any 2 correct examples; Using Blender for 3D modelling and animation. Creating textures in Adobe Substance Painter.	Any 1 correct examples; Using Blender for 3D modelling and animation.
Community Solution (10 marks)	Any 4 correct examples; Using Blender to create realistic 3D models. Employing Adobe Dimension for product mock-ups. Utilising SketchUp for architectural designs. Creating animations with Autodesk Maya.	Any 3 correct examples; Using Blender to create realistic 3D models. Employing Adobe Dimension for product mock-ups. Utilising SketchUp for architectural designs.	Any 2 correct examples; Using Blender to create realistic 3D models. Employing Adobe Dimension for product mock-ups.	Any 1 correct example; Using Blender to create realistic 3D models.

PEDAGOGICAL EXEMPLARS

- Problem-Based Learning: In mixed-ability groups, analyse selected art and design works to identify the computer software applications that were used in making them.
- Group Work/ Collaborative Learning: In groups, discuss how the computer software applications were used in making the art and design works.
- Project-Based Learning; Group work/ Collaborative Learning: In smaller groups, use ideas from the environment and the available computer software applications to create art and design works.

KEY ASSESSMENT

Level 4: Project-Based Task

Task 3: Art Media Simulation Comparison Report

Write/present a comparative report analysing at least two software applications for simulating art media.

Instructions

a. Select two software tools (e.g., Photoshop vs. Corel Painter).

b. Compare based on features, ease of use, realism of media simulation, and output quality.

c. Include sample images and user interface screenshots.

PLC SESSION 5

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.

2. Use your subject specific app to explore the content before planning. Ask the app to

a. explain the week's concepts in a practical way that will make it easier for learners to understand

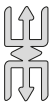
b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).

3. Use your subject specific app to plan your lesson. Ask the app to

a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.

b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)

c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



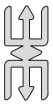
Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app
   a. The key assessment for the week is ***project-based task***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the project-based task (NTS 3k-3q).

10 minutes	Content Exploration

5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then
   a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)
   b. all teachers in the group work through a similar problem individually for 3–4 minutes
   c. the group then works through the problem together step by step
   d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-lb, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).
   a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.
   b. After the enactment, ask for structured feedback from the group
      i. was the concept explained in a way that a learner with no prior knowledge could follow?
      ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

Section 2 Review

Throughout this section, learners have engaged in a comprehensive exploration of traditional and digital art media, developing valuable skills across both domains. The investigation into recipes for creating art media from natural and artificial sources has enabled learners to rediscover traditional knowledge whilst fostering resourcefulness and environmental consciousness. Learners have demonstrated impressive ingenuity in gathering and processing materials such as clays, charcoals, plant matter and minerals, transforming these into functional dry media with appropriate binders. Their experimental approach has yielded personalised art materials that connect contemporary practice to historical traditions. Concurrently, learners have developed significant technical proficiency in utilising computer software to simulate artistic effects, analysing existing digital artworks and recreating various media qualities through virtual tools. The comparative analysis between physical and digital approaches has fostered nuanced critical thinking about materiality, authenticity and efficiency in artistic production. Most notably, learners have begun to integrate both approaches, creating hybrid workflows that leverage the unique advantages of each medium. This multifaceted exploration has equipped learners with versatile skills applicable to diverse creative contexts, positioning them to make informed choices about media selection in their future artistic endeavours.

APPENDIX: MARKING SCHEMES FOR THE KEY ASSESSMENTS

WEEK 4

Assessment Criteria (20 marks total)

Criteria	Excellent (5)	Very good (3-4)	Satisfactory (2)	Need improvement (1)
Material Comparison	Any 4 correct examples; 1. Natural art media, such as charcoal and clay, offer unique textures and organic qualities that can enhance the emotional depth of a piece, while artificial media like acrylic paints provide vibrant colours and versatility in application. 2. When comparing the longevity of artworks, natural media often age gracefully, developing a patina over time, whereas artificial media may fade or change chemically, affecting the artwork's integrity. 3. The accessibility of natural art materials, like leaves and stones, allows for spontaneous creativity in outdoor settings, contrasting with the controlled environment often required for using artificial media, such as digital tools.	Any 3 correct examples; 1. Natural art media, such as charcoal and clay, offer unique textures and organic qualities that can enhance the emotional depth of a piece, while artificial media like acrylic paints provide vibrant colours and versatility in application. 2. When comparing the longevity of artworks, natural media often age gracefully, developing a patina over time, whereas artificial media may fade or change chemically, affecting the artwork's integrity.	Any 2 correct examples; 1. Natural art media, such as charcoal and clay, offer unique textures and organic qualities that can enhance the emotional depth of a piece, while artificial media like acrylic paints provide vibrant colours and versatility in application. 2. When comparing the longevity of artworks, natural media often age gracefully, developing a patina over time, whereas artificial media may fade or change chemically, affecting the artwork's integrity.	Only 1 correct example; 1. Natural art media, such as charcoal and clay, offer unique textures and organic qualities that can enhance the emotional depth of a piece, while artificial media like acrylic paints provide vibrant colours and versatility in application. 2. Contrasting with the controlled environment often required for using artificial media, such as digital tools.

Criteria	Excellent (5)	Very good (3-4)	Satisfactory (2)	Need improvement (1)
	4. In terms of environmental impact, natural art media are generally more sustainable, as they are derived from renewable resources, while artificial media can involve harmful chemicals and non-biodegradable components	3. The accessibility of natural art materials, like leaves and stones, allows for spontaneous creativity in outdoor settings, contrasting with the controlled environment often required for using artificial media, such as digital tools.		
Advantages & Disadvantages	Any 4 correct examples; 1. Natural art media, such as oil paints derived from natural pigments, offer a rich texture and depth that can be difficult to replicate with artificial media. 2. Artificial art media, like acrylic paints, provide quick drying times and versatility, allowing artists to experiment with layering techniques that may not be feasible with natural media. 3. Natural media, such as charcoal and pastels, allow for a more organic feel and can create softer transitions in shading compared to the often sharper lines produced by artificial markers. 4. While natural art media can be more environmentally friendly, artificial media often come with a wider range of colours and finishes, appealing to modern artists seeking specific effects.	Any 3 correct examples; 1. .Natural art media, such as 1.oil paints derived from natural pigments, offer a rich texture and depth that can be difficult to replicate with artificial media. 2. Artificial art media, like acrylic paints, provide quick drying times and versatility, allowing artists to experiment with layering techniques that may not be feasible with natural media. 3. Natural media, such as charcoal and pastels, allow for a more organic feel and can create softer transitions in shading compared to the often sharper lines produced by artificial markers.	Any 2 correct examples; 1. Natural art media, such as oil paints derived from natural pigments, offer a rich texture and depth that can be difficult to replicate with artificial media. 2. Artificial art media, like acrylic paints, provide quick drying times and versatility, allowing artists to experiment with layering techniques that may not be feasible with natural media.	Only 1 correct example; Natural art media, such as oil paints derived from natural pigments, offer a rich texture and depth that can be difficult to replicate with artificial media.

Criteria	Excellent (5)	Very good (3-4)	Satisfactory (2)	Need improvement (1)
Artistic Expression	Any 4 correct examples; 1. Natural media such as oil paints allow for a rich texture and depth that can be difficult to replicate with artificial media like acrylics, which tend to dry faster and can lack the same level of blending. 2. When comparing charcoal, a natural medium, to digital drawing tools, one can evaluate the tactile feedback and spontaneity of charcoal against the precision and versatility of digital platforms. 3. Watercolours, a natural art medium, offer a unique transparency and fluidity that can be contrasted with the opaque nature of synthetic paints, highlighting the differences in layering techniques. 4. The use of natural materials like clay in sculpture provides a different aesthetic and physicality compared to artificial materials such as resin, which can mimic the appearance of clay but lacks its organic qualities.	Any 3 correct examples; 1. Natural media such as oil paints allow for a rich texture and depth that can be difficult to replicate with artificial media like acrylics, which tend to dry faster and can lack the same level of blending. 2. When comparing charcoal, a natural medium, to digital drawing tools, one can evaluate the tactile feedback and spontaneity of charcoal against the precision and versatility of digital platforms. 3. Watercolours, a natural art medium, offer a unique transparency and fluidity that can be contrasted with the opaque nature of synthetic paints, highlighting the differences in layering techniques.	Any 2 correct examples; 1. Natural media such as oil paints allow for a rich texture and depth that can be difficult to replicate with artificial media like acrylics, which tend to dry faster and can lack the same level of blending. 2. When comparing charcoal, a natural medium, to digital drawing tools, one can evaluate the tactile feedback and spontaneity of charcoal against the precision and versatility of digital platforms	Any 1 correct example; Natural media such as oil paints allow for a rich texture and depth that can be difficult to replicate with artificial media like acrylics, which tend to dry faster and can lack the same level of blending.

Criteria	Excellent (5)	Very good (3-4)	Satisfactory (2)	Need improvement (1)
Sustainability & Culture	Any 4 correct examples; 1. Natural art media, such as charcoal and watercolour, offer unique textures and organic qualities that can evoke a sense of authenticity in artwork. 2. Artificial art media, like acrylic paints and digital tools, provide vibrant colours and precision, allowing for a different kind of creative expression. 3. The longevity of natural media, such as oil paints, can be contrasted with the potential for digital art to be easily replicated and shared across platforms. 4. While natural media often require a deeper understanding of materials and techniques, artificial media can democratize art-making by making it more accessible to beginners.	Any 3 correct examples; 1. Natural art media, such as charcoal and watercolour, offer unique textures and organic qualities that can evoke a sense of authenticity in artwork. 2. Artificial art media, like acrylic paints and digital tools, provide vibrant colours and precision, allowing for a different kind of creative expression. 3. The longevity of natural media, such as oil paints, can be contrasted with the potential for digital art to be easily replicated and shared across platforms.	Any 2 correct examples; 1. Natural art media, such as charcoal and watercolour, offer unique textures and organic qualities that can evoke a sense of authenticity in artwork. 2. Artificial art media, like acrylic paints and digital tools, provide vibrant colours and precision, allowing for a different kind of creative expression.	Any 1 correct example; Natural art media, such as charcoal and watercolour, offer unique textures and organic qualities that can evoke a sense of authenticity in artwork.

Week 5

Marking Scheme (Total: 15 marks)

Criterion	Marks
Depth of analysis and comparison	6
Clarity and organisation of the report	3
Use of relevant examples/screenshots	3
Grammar and writing style	3

SECTION 3: ETHICAL CONSIDERATIONS IN ART

STRAND: ART AND DESIGN THEORIES AND APPLICATION

Sub-Strand: Professional practice and ethics

Learning Outcome: *Apply ethical considerations in relation to the artist's use of others' art and design work to create own art and design work.*

Content Standard: Demonstrate knowledge and understanding of ethical considerations in the use of others' art and design work to create.

INTRODUCTION AND SECTION SUMMARY

This section explores the link between artistic expression and ethical responsibility, guiding learners to reflect on professional conduct in creative work. Key issues include cultural appropriation, sensitive subjects, sustainability, and proper attribution. Learners examine the tension between artistic freedom and censorship, using case studies and group discussions to explore how ethics influence artistic choices across cultures. Rather than seeing censorship as purely good or bad, learners assess when limiting expression may serve society or silence critical voices. This broad enquiry equips them with tools to handle ethical challenges, showing that awareness can support, not limit, genuine expression. By engaging with these ideas, learners are better prepared to produce work that is both creative and ethically aware, ready to take part in cultural discussions with responsibility. This understanding supports professional practice in a global context where creative decisions have real ethical weight.

The weeks and the indicators covered by the section are:

- Week 6: Examine ethical considerations to be observed in art studio practice.
- Week 7: Discuss the essence of censoring artworks to meet societal ethics.

Having examined art and design media formulation and use in creating art and design, learners now build on these foundations to apply ethical considerations in relation to the artist's use of others' art and design work to create own art and design work. These earlier lessons set the stage for more advanced artistic exploration.

Recap indicators for the section

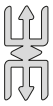
Year 1:	Week 1: Document the roles of the various components of the Art and Design Studio. Analyse the concept of ethics in Art and Design. Analyse the combination of artistic form and content to make artistic decisions. Week 2: Discuss the basic methods for preparing and storing art media.
Year 2:	Week 1: Examine etiquettes to be observed in Art and Design studio practices and their implication in teaching and learning the subject. Week 2: Analyse the concept of professional ethics in design. Categorise ethical issues associated with art and design.

SUMMARY OF PEDAGOGICAL EXEMPLARS

This teaching sequence uses structured group work to build learners' understanding of ethics in art. It begins with mixed-ability groups analysing artworks to identify issues of appropriation and reinterpretation. Smaller problem-based groups then explore material ethics and sustainability, linking artistic choices to environmental concerns. Through guided questioning, learners examine censorship in context, considering its broader social roles. The sequence moves to practical tasks, including visual diaries that highlight artworks promoting national unity. This leads to creative work, as gender-sensitive groups design pieces encouraging social harmony. In the final task, learners engaging in Mini-Class Project the requires them to create artworks by reflecting on diverse cultural, religious, and moral lenses, helping them to develop empathy and ethical insight. The sequence blends critical analysis with creative practice, helping learners apply ethical thinking in their own work.

ASSESSMENT SUMMARY

This section uses a layered assessment approach to gauge learners' understanding of ethics and censorship in art. For ethics, assessment starts with tasks identifying basic protocols in professional practice (DoK Level 1 Recall), followed by case studies applying ethical frameworks (DoK Level 2), and then dilemma-based tasks requiring reasoned responses (DoK Level 3 Strategic reasoning). Censorship is assessed through comparative analysis of different cultural approaches, leading to position papers where learners argue thoughtful views on censorship in art (DoK Level 4 Critical thinking). Assessment includes both written work and group discussions, guided by observation protocols. Focus is placed on how well learners consider varied perspectives and cultural contexts. This ensures a full evaluation of their ability to engage with the ethical challenges in creative expression.



Note

A variety of assessment modes should be implemented to evaluate learners' understanding and performance of the concepts covered in this section. Teachers need to conduct these assessments regularly to track learners' progress effectively. You are encouraged to administer the recommended assessments each week, carefully record the results, and submit them to the Student Assessment Portal (SAP) for documentation. The assessments are; Case Study Assessment and Debate Assessment

Learning Indicators	DOK Level	Assessment Strategy and/or Mode
Examine ethical considerations to be observed in art studio practice.	4	Project-based Case Study Assessment
Discuss the essence of censoring artworks to meet societal ethics.	3	Project-based Debate Assessment

WEEK 6

Learning Indicator: *Examine ethical considerations to be observed in art studio practice*

FOCAL AREA: ETHICAL CONSIDERATIONS IN STUDIO PRACTICE

1. *What are ethics?*
2. *What are the ethics associated with studio practice?*

UNDERSTANDING ETHICS

What are Ethics?

Ethics are a set of principles or rules that help people decide what is right and wrong. They guide how we behave and interact with others in our homes, schools, workplaces, and communities. In simple terms, ethics help us know the difference between good and bad behaviour.

Importance of Ethics in Ghanaian Society

Ethics are very important in Ghana because they help people:

- live peacefully with one another.
- show respect to elders and authority.
- be honest and trustworthy in our daily lives.
- promote justice and fairness in our communities.
- fight corruption and dishonesty.

Examples of Ethical Values in Ghana

Ethical Value	What It Means
Respect	Showing honour to parents, elders, teachers, and others.
Honesty	Telling the truth and being sincere.
Hard work	Doing your best in school, at work, or in any activity.
Responsibility	Taking charge of your actions and duties.
Kindness	Being caring and helpful to others.
Loyalty	Being faithful to your family, friends, or nation.

Sources of Ethics in Ghana

Ghanaian ethics come from many sources, such as:

- Traditional customs and values (e.g., respect for elders, natural environment etc).
- Religious teachings (e.g., from Christianity, Islam, and African traditional religion).
- The laws of Ghana (e.g., the Constitution and rules of society).
- The family (parents and guardians who teach children right from wrong).

Understanding ethics

Understanding ethics helps a person to:

- make good decisions in difficult situations.
- become a responsible citizen.
- avoid bad peer pressure.
- build strong character for the future.
- prepare to be a good leader in your school and country.

Ethics are not just rules in books, they are part of people's daily lives. When people choose to do the right thing, even when no one is watching, you are practising good ethics. As future leaders of Ghana, you must understand and live by strong ethical values.

Importance of ethics in studio practice

Ethics in studio practice are the rules and principles that guide how artists behave and work in the studio. They help to ensure that the creative environment is safe, respectful, honest, and responsible. Ethics are important in studio practice because they help to:

- protects clients, patrons, society and creative environment
- shows respect for others' work and ideas.
- promotes originality and creativity.
- helps build discipline and professionalism.
- reflects good moral values in art.

Key Ethical Principles in Studio Practice

Ethical Principle	Explanation
Respect for Others	Do not damage or destroy other students' work. Treat everyone with dignity.
Originality	Create your work. Avoid copying or stealing ideas from others (no plagiarism).
Responsibility	Take good care of studio tools and materials. Clean up after working.

Ethical Principle	Explanation
Honesty	Be truthful about your contributions to group projects or classwork.
Safety and Care	Follow safety rules when using sharp tools, chemicals, or machines.
Discipline	Manage your time well and work seriously. Do not disturb others in the studio.
Sustainability	Use materials wisely to avoid waste. Recycle when possible.

Unethical Behaviour in Studio Practice

- Copying someone else's design or artwork without permission.
- Vandalising or damaging tools or artwork.
- Being careless with dangerous materials.
- Taking art supplies without asking (stealing).
- Disrespecting classmates or teachers in the studio.
- Refusing to follow safety rules.

Other Key Ethical Areas

Cultural Sensitivity and Representation

- Respectful portrayal of Ghanaian cultural symbols and traditions.
- Understanding the significance of traditional motifs before incorporating them.
- Avoiding cultural appropriation while promoting cultural appreciation.

Environmental Stewardship

- Responsible sourcing of materials (especially for sculpture, ceramics, and textiles).
- Sustainable studio practices that minimise waste.
- Considering ecological impact in material selection and disposal.

Intellectual Property and Copyright

- Respecting intellectual property laws in Ghana.
- Understanding when and how to properly attribute inspiration.
- Protecting your original work while respecting others'.

Ethical Representation

- Considering the impact of your artistic choices on different communities.
- Responsible portrayal of sensitive subjects.
- Awareness of how your art might perpetuate or challenge stereotypes.

Learning Tasks

Mini Project for weeks 6 and 7: Ethical Art Practice with Natural Media

Duration: 3 hours (*should be extended across the 2 weeks*)

Project Brief/Theme: "Ethical Natural Solutions: Responsible Art for Community Change"

This project requires learners to:

1. Create art media from ethically sourced natural and artificial materials by applying multiple techniques to develop a 3D artwork addressing a community issue.
2. Document your ethical considerations, material processing, and creative decisions.

Ethical Framework

Before beginning, consider these ethical aspects of art studio practice:

- Sustainable material sourcing and environmental impact
- Proper attribution when inspired by existing artworks
- Cultural sensitivity when using traditional techniques or symbols
- Appropriate content considering community values and standards
- Responsible messaging that promotes social cohesion

Suggested Art Forms and Community Solutions (*Aside from these suggested ones, learners may choose to develop their own ideas in line with the suggested ones*)

1. **Architectural Model with Natural Materials**

   Community Problem: Lack of sustainable housing designs

   Suggested Approach: Create a scale model of an eco-friendly building design.

   - Use locally sourced clay/discarded cardboards, etc, for walls and foundations.
   - Incorporate natural insulation materials like dried grass or cotton.
   - Create natural dyes to colour-code sustainable features.
   - Include educational elements about energy efficiency and local materials.
   - Document the ethical sourcing of all model materials.

2. **Textile Mural with Natural Dyes**

   Community Problem: Loss of traditional dyeing knowledge

   Suggested Approach: Create a collaborative textile piece documenting local plants.

   - Ethically harvest and process plants for natural dyes (with permission).
   - Use locally sourced cotton or other fibres *(try weaving own fabrics where equipment are available)*

- Create patterns representing medicinal or useful local plants.
- Include proper attribution of traditional knowledge sources.
- Design for display in community education centres.

3. Calabash Sound Installation

Community Problem: Noise pollution in community spaces.

Suggested Approach: Create acoustic modification elements from natural materials.

- Use ethically sourced calabashes/gourds/any hollow natural objects of different sizes for sound absorption.
- Process natural fibres for interior acoustic dampening.
- Create natural adhesives from plant sources.
- Design a hanging system using sustainable materials.
- Document the acoustic properties of different natural materials.

4. Pressed Seed Mosaic

Community Problem: Declining awareness of native plant species.

Suggested Approach: Create an educational mosaic showing local biodiversity.

- Ethically collect seeds from non-endangered plants.
- Document permission for seed collection.
- Process natural binders for seed attachment.
- Create an educational design showing plant relationships.
- Include proper scientific and traditional naming.
- Design for durability in outdoor educational settings.

5. Natural Paper Sculpture

Community Problem: Paper waste and deforestation.

Solution Approach: Create an informational sculpture/any 3-D work from recycled paper.

- Process waste paper into new paper pulp.
- Add natural strengtheners like plant fibres.
- Create natural dyes for colour elements.
- Form educational shapes about paper conservation.
- Document the paper recycling process for educational purposes.
- Design for indoor display at schools or libraries.

Project Structure

Phase 1: Ethical Considerations and Planning

1. Group discussion on ethics in art studio practice:
   - What makes material sourcing ethical?
   - How to properly attribute inspiration sources?
   - When might censorship be appropriate in community art?
   - How can art promote national cohesion?

2. Select a community problem and art form:
   - Research the ethical dimensions of your chosen problem.
   - Document potential ethical concerns with your approach.
   - Plan how to address these concerns in your work.

Phase 2: Ethical Material Collection and Processing

1. In groups, collect materials using ethical practices:
   - Get permission for material collection where needed.
   - Take only what is needed, using sustainable harvesting.
   - Document the source and collection method for each material.
   - Consider the environmental impact of processing methods.

2. Process materials into usable art media:
   - Use environmentally responsible processing techniques.
   - Document any traditional knowledge incorporated.
   - Test materials for safety and appropriateness.

Phase 3: 3D Artwork Creation

Create a 3D artwork using at least three ethically processed natural media and diverse techniques appropriate to your chosen art form to address a community problem, based on unity, peace, or national cohesion. Consider potential censorship issues.

Your artwork must

- Clearly address the identified community problem.
- Incorporate at least three different natural media you have created.
- Demonstrate multiple techniques in application.
- Include elements that promote unity, peace, or national cohesion.
- Consider potential censorship issues and make appropriate design choices.

Phase 4: Ethical Documentation and Presentation

Create a presentation package that includes:

1. **Materials Ethics Documentation**
   - Sources of all materials with permissions obtained
   - Sustainable harvesting or collection methods are used
   - Attribution of any traditional knowledge incorporated

2. **Censorship and Cultural Sensitivity Statement**
   - How your work respect diverse cultural, religious, and moral perspectives
   - Design choices made to ensure appropriate content
   - Considerations for potential viewers with different backgrounds

3. **Community Impact Statement**
   - How your artwork addresses the community problem
   - How it promotes national cohesion and unity
   - Potential social benefits of your approach

Grading Rubric

Criteria (10 marks)	Excellent (8-10)	Very good (5-7)	Satisfactory (3-4)	Needs improvement (1-2)
Ethical Material Practice	Any 4 correct examples; Ensuring all materials used are sourced ethically and documented properly. Acknowledging and respecting diverse cultural perspectives in all documentation. Assessing the positive and negative effects of practices on local communities. Engaging with community stakeholders to gather feedback on ethical practices.	Any 3 correct examples; Ensuring all materials used are sourced ethically and documented properly. Acknowledging and respecting diverse cultural perspectives in all documentation. Assessing the positive and negative effects of practices on local communities.	Any 2 correct examples; Ensuring all materials used are sourced ethically and documented properly. Acknowledging and respecting diverse cultural perspectives in all documentation.	Any 1 correct example; Ensuring all materials used are sourced ethically and documented properly.

Criteria (10 marks)	Excellent (8-10)	Very good (5-7)	Satisfactory (3-4)	Needs improvement (1-2)
Technical Application	Any 4 correct examples; Use of ethically sourced materials in projects. Respecting cultural symbols in design. Engaging local artists in collaborative projects. Hosting workshops to educate on cultural heritage.	Any 3 correct examples; Use of ethically sourced materials in projects. Respecting cultural symbols in design. Engaging local artists in collaborative projects.	Any 2 correct examples; Use of ethically sourced materials in projects. Respecting cultural symbols in design.	Any 1 correct example; Use of ethically sourced materials in projects.
Community Solution	Any 4 correct examples; Use of sustainable materials in community projects. Respecting local traditions in project implementation. Increased access to clean water through innovative filtration systems. Job creation through local manufacturing initiatives.	Any 3 correct examples; Use of sustainable materials in community projects. Respecting local traditions in project implementation. Increased access to clean water through innovative filtration systems.	Any 2 correct examples; Use of sustainable materials in community projects. Respecting local traditions in project implementation .	Any 1 correct example; Use of sustainable materials in community projects.
Cultural Sensitivity & Cohesion	Any 4 correct examples; Ensures that all materials used are sourced ethically and promote inclusivity. Acknowledges the importance of representing diverse cultures without bias. Highlights the positive effects of the work on local communities and their engagement. Promotes dialogue and understanding among different cultural groups through collaborative projects.	Any 3 correct examples; Ensures that all materials used are sourced ethically and promote inclusivity. Acknowledges the importance of representing diverse cultures without bias. Highlights the positive effects of the work on local communities and their engagement.	Any 2 correct examples; Ensures that all materials used are sourced ethically and promote inclusivity. Acknowledges the importance of representing diverse cultures without bias.	Any 1 correct example; Ensures that all materials used are sourced ethically and promote inclusivity.

Differentiation Strategies

- Provide pre-processed materials with ethical sourcing documentation.
- Allow for collaborative work with different roles based on abilities.
- Offer templates for ethical documentation.
- Provide visual examples of ethically created artworks.
- Allow for verbal presentations rather than written documentation if needed.
- Ensure the workspace accommodates learners with different physical abilities.

Task 2: Essay Writing/Presentation

Question: Write a short essay (about 150–200 words) or make a presentation on "The Role of Ethics in Becoming a Good Artist in Ghana".

Grading Rubric

Criteria	Excellent (9–10 marks)	Very Good (6–8 marks)	Satisfactory (3–5 marks)	Needs Improvement (0–2 marks)
Content & Relevance (4 marks)	Clearly explains the importance of ethics (e.g., originality, respect for culture, honesty). Gives at least two relevant examples from Art in Ghana practice.	Discusses ethics with some clarity; includes one example or explanation linked to Ghanaian artists.	Mentions ethics but explanation is unclear or not well-developed; no example given.	Little or no understanding of ethics in art; irrelevant or off-topic.
Structure & Clarity (3 marks)	Well-organised with clear introduction, body, and conclusion. Ideas flow logically and clearly.	Some organisation; ideas are mostly clear with minor lapses in flow.	Poor structure; ideas are jumbled or unclear in parts.	Disorganised or very difficult to follow.
Grammar & Language Use (3 marks)	Uses correct grammar, spelling, and vocabulary appropriate for an essay.	Minor grammatical errors; mostly clear and appropriate language.	Frequent grammar issues but meaning is still mostly understandable.	Many errors that make the essay hard to read or understand.

Total Marks for All Tasks: 50

PEDAGOGICAL EXEMPLARS

- Group work/ Collaborative Learning; Project-Based Learning: In mixed-ability groups, analyse art and design works to identify ethical considerations in the use of existing artwork to create new art and design works.

- Problem-Based Learning/Group work/ Collaborative Learning: In smaller groups, examine the ethical considerations relating to materials use and how it promotes a sustainable environment.

KEY ASSESSMENT

Mid-Semester Examination

Group Work

As a team, design an **"Ethical Studio Code of Conduct" poster** or digital booklet to be displayed in the school art room. It must cover:

- Definition of ethics and its importance
- Rules for respecting others, originality, cultural sensitivity, and safety
- Real-life examples or illustrations of ethical/unethical behaviour
- A creative design that reflects the studio's values

Reflective Writing/Presentation Prompt

What ethical challenges did your group consider when designing the Code of Conduct? How did your choices promote a better creative environment?



Hint

*Conduct **Mid-semester Examination**. It should cover contents taught from Week 1 to 5. Refer to the **Table of Specification and Structure of the Paper**. Learners' papers should be marked immediately and scores entered into the STP.*

SUGGESTED STRUCTURE OF THE MID-SEMESTER EXAMINATION

Section A: 25 Multiple-choice questions

Section B: 2 Essay Questions

Table of specification for item construction for section A and B

Week	Learning Indicator	Type of questions	DoK Levels				Total
			1	2	3	4	
1	Learners acquaint themselves with the Copyright Act of Ghana, 2005 (Act 690); Patent Act, 2003 (Act 657); Trademarks Act, 2004 (Act 664); Company Act, 2019 (Act 992); and their implications on art and design studio practices	MCQs	2	2	–		4
		ESSAY	–	–	–		–
2	Investigate the art business registration, its importance, and implications on art studio practice	MCQs	2	2	2		6
		ESSAY	–	–	1		1
3	Investigate how art laws and policies inform societal development	MCQs	–	2	1		3
		ESSAY	–	–	–		
4	Research into recipes for making art media from natural and artificial sources	MCQs	3	2	1		6
		ESSAY					
5	Use computer software applications to simulate effects of art media	MCQs	1	3	2		6
		ESSAY			1		1
		Total	**8**	**11**	**8**		**27**

PLC SESSION 6

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous session, focusing on how learning was applied.

2. Use your subject specific app to explore the content before planning. Ask the app to

a. explain the week's concepts in a practical way that will make it easier for learners to understand.

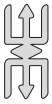
b. identify three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners (NTS 3a, 3g and 3m).

3. Use your subject specific app to plan your lesson. Ask the app to

a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.

b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q).

c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Use your app to plan and administer the mode of assessment for the Student Assessment Portal (SAP)

a. The key assessment for the week is ***mid-semester examination***. Chat with your app to plan this assessment by reviewing or developing the assessment items/tasks and marking schemes/rubrics for the mid-semester examination (NTS 3k-3q).

10 minutes	**Content Exploration**

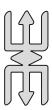
5. As a subject group, select one problem or topic/idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then

a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through the problem individually for 3–4 minutes

c. the group then works through it together the problem, step by step

d. highlight the most common errors made at each step (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.

- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 7

Learning Indicator: *Discuss the essence of censoring artworks to meet societal ethics*

FOCAL AREA: CENSORSHIP AND THE ARTS

1. *What is censorship?*
2. *What is the essence of censorship and the impact on societal ethics?*

UNDERSTANDING CENSORSHIP

Censorship is the act of controlling, limiting, or removing parts of information, speech, books, art, music, films, news, or any form of expression that is considered harmful, offensive, or inappropriate by a government, school, media organisation, or religious group. Censorship is often used to:

- protect national security.
- prevent the spread of false information or hate speech.
- protect public morals and cultural values.
- stop the display of violent or sexual content.
- maintain peace and order in society.
- respect religious and traditional beliefs.

Types of Censorship

Type	Example
Media censorship	Banning certain radio or TV programmes that promote violence.
Art censorship	Stopping the display of artwork that is seen as disrespectful to culture.
Internet censorship	Blocking access to websites with harmful or false content.
Book censorship	Removing books from schools that contain inappropriate language or topics.

Censorship in the Ghanaian Context

In Ghana, censorship is usually guided by:

- The Constitution of Ghana, which gives people the right to freedom of expression but with responsibility.
- The National Media Commission and Film Classification Board, which regulate content shown to the public.
- Traditional and religious values, which influence what is accepted in society.

Examples



Figure 7.1: *Tom Cole. You Ask, We Answer: 'Parental Advisory' Labels — The Criteria And The History*

Figure 7.1 shows a black and white warning label with bold text. The label reads: PARENTAL

Advisory Explicit Content

The words "PARENTAL" and "EXPLICIT CONTENT" are in smaller white letters on a black background, while "ADVISORY" is in large black letters on a white background. This is a common label used to warn about explicit material, often seen on music albums or media with strong language or adult themes.



Figure 7.2: *Green movie rating screen*

Figure 7.2 shows a green movie rating screen with white text. The text says that the following preview has been approved for appropriate audiences by the Motion Picture Association of America, Inc. There is a box in the centre with a large "R" rating symbol, labelled "RESTRICTED," and a note that under 17 requires accompanying parent or adult guardian. Below that, it lists reasons for the rating: "Crude and sexual content throughout, nudity, drugs, drinking, pervasive language, reckless behaviour and mayhem, all involving teens." There are also two website addresses at the bottom: www.filmratings.com and www.mpaa.org.

- Films with excessive nudity or violence are rated or banned.

- Music with offensive lyrics may be removed from the airwaves.
- News outlets must avoid spreading lies or inciting fear.

Advantages of Censorship

1. Protects national security by restricting sensitive information.
2. Reduces harmful content such as extreme violence and pornography.
3. Protects children from inappropriate material.
4. Limits hate speech that may incite violence or discrimination.
5. Protects personal privacy by restricting the publication of sensitive information.
6. Prevents the spread of false information that could cause public harm.
7. Protects cultural values from content considered offensive or inappropriate.
8. Controls harmful media content in films, television, and online platforms.
9. Protects victims by restricting the publication of traumatic or identifying material.
10. Maintains public order by limiting content that could provoke unrest or violence.

Disadvantages of Censorship

1. Limits freedom of expression by restricting what people can say or publish.
2. Restricts access to information that the public may have a right to know.
3. May suppress criticism of governments and institutions.
4. May encourage abuse of power by those controlling what can be published.
5. Limits artistic creativity by restricting controversial subjects and ideas.
6. Can hinder education and research by preventing access to certain information.
7. May promote secrecy rather than openness and accountability.
8. May be used to manipulate public opinion by controlling available information.
9. May suppress minority voices whose views differ from those in authority.
10. Can encourage underground distribution of restricted materials.

The Essence of Censoring Artworks to Meet Societal Ethics

Art censorship helps the restricting, changing, or removing parts of artworks (such as paintings, sculptures, performances, films, or music) that are considered offensive, immoral, or harmful by a society or authority. This is done to make sure that art respects the values, beliefs, and ethical standards of the community it is shared with. it is usually governed by the societal ethics rules and moral values that guide how people should behave in a community. In Ghana, these include:

1. Protects public morality by limiting artworks considered offensive or harmful to accepted social values.
2. Protects vulnerable groups, particularly children, from disturbing or inappropriate imagery.
3. Prevents hate and discrimination by restricting artworks that promote hostility towards particular groups.
4. Respects cultural values by considering beliefs, traditions, and sensitivities within a society.
5. Reduces social conflict by limiting artworks likely to provoke serious communal tensions.
6. Protects human dignity by restricting degrading or humiliating representations of individuals or groups.
7. Controls explicit content involving extreme violence, sexual imagery, or other potentially harmful material.
8. Promotes responsible artistic practice by encouraging artists to consider the social consequences of their work.
9. Protects sacred and sensitive subjects from representations that communities may regard as deeply disrespectful.
10. Maintains social harmony by balancing artistic freedom with commonly accepted ethical standards.

Why should art be censored to match societal ethics

Reason	Explanation
Protect moral values	Prevents exposure to nudity, violence, or offensive content that may corrupt minds.
Respect cultural and religious beliefs	Ensures art does not insult traditions, religions, or sacred practices.
Prevent conflict or violence	Stops artworks that promote hate, discrimination, or division.
Promote public decency	Ensures that artworks shown in public spaces are appropriate for all ages.
Guide young people	Protects students and children from harmful or confusing content.

Balancing Artistic Freedom and Responsibility

1. Respect freedom of expression while recognising reasonable social limits.
2. Consider the impact an artwork may have on individuals and communities.
3. Avoid deliberate harm through hateful, degrading, or threatening representations.
4. Respect cultural sensitivities when addressing beliefs, traditions, and identities.
5. Protect vulnerable audiences, especially children, from inappropriate content.

6. Distinguish criticism from harm so that challenging ideas are not unnecessarily suppressed.
7. Maintain artistic integrity while considering ethical implications.
8. Provide appropriate context for controversial or sensitive artworks.
9. Accept diverse interpretations rather than assuming a single meaning or response.
10. Take responsibility for choices concerning materials, subjects, images, and methods of presentation.

Censoring artworks to meet societal ethics helps to protect cultural values, ensure respect, and promote peace. In Ghana, artists are encouraged to create meaningful, respectful, and inspiring work that contributes to the development of society while honouring ethical standards.

Learning Tasks

Task 1

Refer to the **Mini Project for weeks 6 and 7**: Ethical Art Practice with Natural Media

Task 2

Artistic Censorship Analysis (20 minutes)

Materials Needed

- Worksheet provided (with censorship examples)
- Pen/pencil
- Blank paper for quick sketching
- Instructions

Part 1: Quick Analysis (12 minutes)

Examine the three examples of artistic censorship provided on the worksheet:

- A Ghanaian political cartoon from 2018
- A controversial international artwork from 2010
- A historical censorship case from the 1970s

For each example, complete the mini-analysis chart:

- Circle the likely reason for censorship: Political / Religious / Moral / Cultural.
- Write/present one sentence explaining why this artwork might have been considered controversial.
- Suggest one possible outcome of the censorship.

- Draw/present a quick sketch of how the artist might have modified their work to avoid censorship while keeping their message.

Part 2: Personal Reflection (5 minutes)

Answer these questions in 2-3 sentences each:

- Which example do you think had the most justified reason for censorship? Why?
- How might censorship affect artistic expression in Ghana today?
- Is there a difference between censorship and responsible curation? Explain.

Part 3: Quick Share (3 minutes)

- Be prepared to share one insight from your analysis with the class.

PEDAGOGICAL EXEMPLARS

- Talk for Learning; Group work/ Collaborative Learning: Through question and answers discuss the concept and importance of censorship in art and design.
- Group Work/ Collaborative Learning; Project-Based Learning: In mixed-ability groups, generate a visual diary of art and design works whose symbolisms and meaning promote national cohesion.
- Project-Based Learning; Group work/ Collaborative Learning: In a gender-sensitive group, design and produce 2-D and 3-D artworks that promote unity, peace, cohesion and nationalism.
- Group work/ Collaborative Learning; Experiential Learning: In mixed ability groups that recognise religious, moral, cultural and gender differences investigate why some societal groups may consider some works of art controversial.

KEY ASSESSMENTS

Level 4: Group Project Work

Create a thematic group artwork or digital campaign (poster, video, infographic, or installation) addressing the topic that includes quotes or interviews, based on ethical reasoning and can be exhibited in your school. The theme is as follows: *"Censorship vs. Freedom: Where Should Art Draw the Line?"*

Your project must:

- Present multiple viewpoints
- Include quotes or interviews (real or hypothetical)
- Show ethical reasoning and studio values
- Be suitable for public exhibition or display in your school

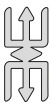
Reflective Prompt

What did your group learn about the balance between creative expression and societal values during this project?

PLC SESSION 7

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app
   a. The key assessment for the week is ***group project work***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the project (NTS 3k-3q).

10 minutes	Content Exploration

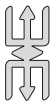
5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then

a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

Section 3 Review

Throughout this section, learners have explored the ethical dimensions of contemporary art, gaining a strong understanding of studio ethics and the role of censorship. By examining issues like cultural sensitivity, attribution, representation, and sustainability, learners have analysed artists' responsibilities in practice. This has supported deeper discussion on censorship, helping learners see it not just as restriction but as a tool for balancing freedom and social duty. Group work in the form of Mini class project and analysis of artworks, encouraged empathy and respect for varied cultural, moral, and religious views on artistic limits. Through visual diaries and artworks promoting unity, learners applied their knowledge to real decisions, experiencing how artists often self-regulate. Most importantly, they have come to see that ethical awareness supports, rather than limits, creative freedom. This experience gives learners key tools for facing ethical challenges in their future practice, allowing them to create meaningful, responsible art in a diverse world.

APPENDIX: MARKING SCHEMES FOR THE KEY ASSESSMENTS

WEEK 6

Grading Rubric (Total: 20 marks)

Criteria	Excellent (9–10 marks)	Very Good (6–8 marks)	Satisfactory (3–5 marks)	Needs Improvement (0–2 marks)
Content Accuracy & Relevance (4 marks)	Clearly defines ethics and explains its importance in art. Includes specific rules on originality, respect, safety, and cultural sensitivity.	Defines ethics and includes most key rules but may lack depth or one key aspect.	Ethics mentioned but definition or rules are vague or incomplete.	Lacks a clear definition or rules are missing/ inaccurate.
Real-life Examples/ Illustrations (2 marks)	At least 2 clear, relevant examples of ethical/ unethical studio behaviour (e.g., copying someone's artwork, cultural appropriation).	One example given or examples are general.	Vague or unclear examples.	No examples included.
Creativity & Design (2 marks)	Visually appealing; includes school/ studio symbols, colour, layout, and design elements that reflect studio values.	Attractive but less creative; basic use of colour and symbols.	Limited creativity or poor design balance.	Lacks effort or visual appeal.
Team Collaboration & Organisation (2 marks)	Poster/booklet shows clear team effort—neat, well-organised sections, shared input.	Some evidence of teamwork and planning; mostly organised.	Minimal collaboration shown; uneven effort or unclear structure.	Disorganised and little sign of

WEEK 7

Grading Rubric (Total: 20 marks)

Criteria	Excellent (5 marks)	Very Good (4 marks)	Satisfactory (3 marks)	Needs Improvement (1–2 marks)
Multiple Viewpoints (5 marks)	Presents 3+ clearly contrasting perspectives (e.g., artist, society, government); visually or narratively integrated	Presents 2 different viewpoints with some clarity	Presents 1 or 2 vague or underdeveloped viewpoints	Lacks clarity or only presents a one-sided view
Quotes/ Interviews (5 marks)	Includes 3+ relevant quotes (real or well-constructed hypothetical) from diverse voices (artist, teacher, policymaker, etc.)	Includes 2 relevant quotes or interviews with basic connection to topic	Includes 1 vague or loosely related quote	Quotes missing or poorly integrated
Ethical Reasoning & Studio Values (5 marks)	Strong use of ethical arguments (e.g., respect, originality, responsibility); clearly visible in content	Ethical reasoning somewhat clear, values are mentioned	Ethical points are vague or superficial	No clear ethical reasoning or studio values present
Creativity & Presentation Format (5 marks)	Format highly engaging (e.g., animated video, large installation, layered infographic); professional finish	Format is engaging and neat; meets basic display expectations	Format is functional but lacks creative depth or clarity	Messy, hard to follow or poorly presented

SECTION 4: ART FOR SUSTAINABLE DEVELOPMENT

STRAND: CREATIVE METHODOLOGIES

Sub-Strand: Thinking Studio

Learning Outcome: *Analyse existing artworks and designs, and create innovative and inventive artworks and designs centred on sustainable development using both digital and other media ideations.*

Content Standard: Demonstrate knowledge and understanding of 21st-century futuristic propositions and product design for Sustainable Development Goals (SDGs).

INTRODUCTION AND SECTION SUMMARY

This section explores how art and sustainability connect, helping learners become critical interpreters and creative communicators of environmental values. Learners begin by analysing artworks with sustainability themes, focusing on visual metaphors, symbols, and narratives while reflecting on their responses. They then create original works using digital and traditional media to raise awareness of sustainable living. The final task involves designing artworks that reflect sustainability in both theme and materials, using biodegradable and recyclable waste. Through this process, learners gain insight into art's role in environmental issues, improving their ability to read and use visual strategies. By aligning ideas with eco-friendly materials, they adopt a holistic approach to responsible art-making. This prepares learners to share meaningful messages on sustainability through their creative work.

The weeks and the indicators covered by the section are:

- Week 8: Discuss embedded sustainable development messages within selected artworks through the analysis of the actual meaning of the image, and reflection and reaction.
- Week 9: Create innovative artworks and designs on sustainable development using both digital and other media ideations to show the relevance of sustainable living.
- Week 10: Create innovative artworks and designs on sustainable development using both digital and other media ideations to show the relevance of sustainable living.

- Week 11: Design and create artwork based on the message of sustainability using biodegradable and 80% recyclable waste materials.

Having demonstrated knowledge and understanding of ethical considerations in the use of others' art and design work to create art and design works, learners now build on these foundations to analyse existing artworks and designs, and create innovative and inventive artworks and designs centred on sustainable development using both digital and other media ideations.

These earlier lessons set the stage for more advanced artistic exploration.

Recap indicators for the section

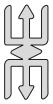
Year 1:	Week 1: Identify and categorise elements and constitution of artistic content and forms. Week 2: Analyse the combination of artistic form and content to make artistic decisions.
Year 2:	Week 1: Demonstrate knowledge and understanding of the interdependent relationship between humans and the physical environment and how they promote sustainable development. Week 2: Apply designing and finishing processes to create an artistic project to solve a social problem

SUMMARY OF PEDAGOGICAL EXEMPLARS

The section's comprehensive pedagogical approach begins with Talk for Learning discussions where learners are led to identify and explore Sustainable Development Goals (SDGs) in contemporary art and design. Groups embarked on experiential learning for environmental walks through their communities and natural settings, documenting observations and watching supplementary videos to extend fieldwork experiences, or to make up for places where such activities are not possible. Through collaborative learning, groups select and analyse Ghanaian artworks from various historical periods to evaluate their sustainability content relevant to community building, responsible consumption and environmental stewardship. Problem-based learning enabled mixed-ability groups to generate analytical reports on their observations on the environment, connecting these directly to specific SDGs. Class discussions then shifts toward futuristic ideas, where learners share innovative design concepts that address documented sustainability challenges. The project-based learning affords learners opportunities to design sustainable concepts using both digital and traditional media, followed by collaborative activities in which small groups implement practical improvements to existing art and design concepts and products. The activities culminates in focused project work where learners attempt solutions for selected SDG categories with corresponding projects, developing creative responses that communicate sustainability with 21st-century futuristic concepts and responsible design principles.

ASSESSMENT SUMMARY

This section employs a comprehensive assessment strategy to evaluate learners' ability to analyse, conceptualise and create sustainability-focused artworks across all learning levels. For Week 8's analysis of sustainable development messages in existing artworks, assessment utilises structured visual analysis frameworks and critical response essays. These evaluate learners' ability to identify visual symbols (DoK Level 1), interpret their conceptual significance (DoK Level 2), and critically reflect on their effectiveness in communicating sustainability themes (DoK Levels 3-4). The creative production weeks (9-10) employ process portfolios and final artwork assessments. Process portfolios document learners' ideation development, digital and traditional media experimentation, and conceptual evolution. Final artwork assessment employs comprehensive rubrics examining technical execution, conceptual clarity and communicative effectiveness of sustainability messaging. Week 11's focus on biodegradable materials introduces material selection documentation as an assessment component, requiring learners to justify material choices and demonstrate understanding of environmental impacts. Final exhibition assessment evaluates both aesthetic quality and adherence to sustainability requirements. Throughout all weeks, assessment incorporates both formative components (sketches, material experiments, peer critiques) and summative evaluations (final artworks, reflective statements). This balanced approach ensures comprehensive evaluation of learners' analytical abilities, technical skills and conceptual understanding whilst reinforcing sustainable practice principles.



Note

A variety of assessment modes should be implemented to evaluate learners' understanding and performance in the concepts covered in this section. It is essential for teachers to conduct these assessments regularly to track learners' progress effectively. You are encouraged to administer the recommended assessments each week, carefully record the results, and submit them to the Student Assessment Portal (SAP) for documentation. The assessments are Research and Presentation Assessment, Project-Based Assessment, and Portfolio Assessment.

Learning Indicators	DOK Level	Assessment Strategy and/or Mode
Discuss embedded sustainable development messages within selected artworks through the analysis of the actual meaning of the image, and reflection and reaction.	4	Research and Presentation Assessment
Create innovative artworks and designs on sustainable development using both digital and other media ideations to show the relevance of sustainable living.	4	Project-Based Assessment

Learning Indicators	DOK Level	*Assessment Strategy and/or Mode*
Create innovative artworks and designs on sustainable development using both digital and other media ideations to show the relevance of sustainable living.	4	Portfolio Assessment
Design and create artwork based on the message of sustainability using biodegradable and 80% recyclable waste materials(s).	4	Project-Based Assessment

WEEK 8

Learning Indicator: *Discuss embedded sustainable development messages within selected artworks through the analysis of the actual meaning of the image, and reflection and reaction*

FOCAL AREA: ANALYSING ARTWORKS TO IDENTIFY HIDDEN MESSAGES

Analyse art and design works that convey sustainable development issues

UNDERSTANDING SUSTAINABLE DEVELOPMENT IN ART

Meaning of the term *Sustainable*

"Sustainable" means meeting today's needs without limiting future generations. It involves three linked areas: environmental (protecting nature), social (fair access and rights), and economic (long-term viability). There is debate between weak sustainability (nature can be replaced) and strong sustainability (nature is irreplaceable). Modern thinking sees sustainability as a flexible, ongoing process, not a fixed goal. True sustainability addresses environmental and social justice together, across time and scale, recognising that humans are part of nature.



Figure 8.1: *The Sustainable Development Goals (SDGs)*

Figure 8.1 shows a poster of the United Nations Sustainable Development Goals (SDGs)—17 global objectives designed to make the world a better place for everyone. These goals are arranged horizontally in square shapes in different colours (6 on one line, 6 below the top 6, and 5 under the second line of six squares). Each square is represented by a unique symbol and colour to make them easily identifiable.

The Role of Sustainability in the Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) framework, originating from the United Nations' 2015 adoption of 17 goals, is based on sustainability as the central organising principle. Sustainability is not limited to environmental goals in the SDGs but emphasises the importance of environmental protection, social inclusion, and economic development working together, reflecting a three-dimensional understanding of sustainability. In the three dimensions in action, all three sustainability dimensions are represented by

- **environmental sustainability**: Goals 6 (Clean Water), 7 (Affordable and Clean Energy), 13 (Climate Action), 14 (Life Below Water), and 15 (Life on Land) directly address ecological systems.
- **social sustainability**: Goals 1-5 and 10 target poverty, hunger, health, education, gender equality, and reduced inequalities.
- **economic sustainability**: Goals 8 (Decent Work and Economic Growth), 9 (Industry, Innovation, and Infrastructure), and 12 (Responsible Consumption and Production) focus on sustainable economic systems.

Balancing Tensions

The SDGs also explores sustainability tensions, particularly in Goal 8's emphasis on economic growth while promoting environmental protection. This reflects ongoing debates about whether endless growth is compatible with ecological sustainability.

How Sustainability Affects Art and Design Concepts

Rethinking Materials and Processes

Sustainability pushes artists and designers to reconsider their material choices and working methods by

- using recycled, plant-based, or renewable materials instead of new raw materials;
- creating things that can be mended, used again, or recycled when worn out;
- cutting down on waste when making artwork or products;
- thinking about how exhibitions and installations affect the environment.

New Aesthetic Directions

Sustainability changes what we find beautiful in art and design by

- valuing "just enough" rather than too much or showing off;
- finding beauty in things that show repairs or signs of age instead of newness;
- appreciating simple, useful designs rather than just decorative ones;
- creating visual styles that show care for the environment.

Social Engagement Focus

The Sustainable Development Goals encourage art and design to help people by

- designing for inclusivity and accessibility by making designs that everyone can use, including disabled people;
- creating participatory art projects where communities work together to build resilience;
- making artwork about environmental fairness;
- using design to make life better for people who struggle.

Shifted Design Methodologies

Sustainability changes how designers approach problems by

- looking at whole systems rather than single products;
- thinking about the entire life of a product, not just when it is bought, new or old;
- working with communities to create solutions, not just created for them;
- using biomimicry or learning from nature's clever solutions to design solutions.

Economic Model Changes

Sustainability challenges traditional art and design business models to consider

- offering services rather than just selling products;
- making sure everyone in the supply chain gets paid fairly;
- developing "slow fashion" and thoughtful design approaches;
- valuing things that last rather than quick trends.

What Sustainable Development Art and Design Works Look Like

Visual Characteristics

Art and design addressing sustainability often feature:



Figure 8.2: *Sustainable design: how design can go green.*

Figure 8.2 shows a picture of an indoor garden in a circular room. In the centre, a round planter is filled with green plants, moss, rocks, and a small tree. Above the planter, a large circular skylight lets in natural light, illuminating the plants. The walls are smooth and light-coloured, with two curved benches placed along the perimeter of the room, creating a calm and minimalist atmosphere.

- **contrasting imagery** showing environmental damage alongside regeneration possibilities
- **infographic elements** that visualise data about resource use, pollution, or climate change
- **temporal storytelling** showing transformation over time (before/after, future scenarios)
- **natural forms and patterns** inspired by ecological systems and organic growth
- **deliberate material visibility** that highlights rather than conceals how things are made



Figure 8.3: *Motorcycle Man Sculpture*

Figure 8.3 shows a picture of two humanoid robots. The robot on the left is shown from the back and has a transparent, almost X-ray-like appearance, showing intricate mechanical parts, wires, and gears inside its body. Its head is turned slightly to the side. The robot on the right is facing forward and has a metallic, skeletal structure with mechanical components, pistons, and joints. Its chest area features some red and orange parts, and its design is more rugged and industrial compared to the left robot. Both robots have human-like proportions and hands, but their bodies are entirely mechanical.

Materials and Approaches

These works typically

- **display innovative materials** like mycelium-based packaging, seaweed textiles, or agricultural waste composites.
- **employ visible recycling** where the previous life of materials remains recognisable.
- **include repair aesthetics** such as visible mending, kintsugi techniques, or adaptive reuse.
- **feature local materials** specific to particular regions and traditions
- **provide material transparency** through documentation of sourcing and processing.

Conceptual Elements

Effective sustainable works often

- **reveal hidden systems** by making visible the normally unseen resource flows or waste streams.
- **challenge consumption** through provocative questions about needs versus wants.
- **link local to global,** connecting specific places to worldwide environmental challenges.
- **include community voices,** particularly from those most affected by environmental issues.
- **offer practical solutions** that viewers might implement in their own lives.

Cross-Disciplinary Innovations

Boundary-pushing sustainable works often bridge fields:

- **Biotechnology + fashion** in Suzanne Lee's BioCouture growing bacterial cellulose garments.
- **Digital fabrication + waste streams** demonstrated by The New Raw's 3D-printed furniture from plastic ocean waste.
- **Synthetic biology + lighting** seen in Teresa van Dongen's "Ambio" lamp powered by bioluminescent bacteria.
- **Architecture + circularity** exemplified by Lendager Group's Upcycle Studios built from 75% upcycled materials.



Figure 8.4: *In defence of renders and trees on top of skyscrapers.*

Figure 8.4 shows a picture of a futuristic cityscape with three tall, uniquely designed buildings. The structures have irregular, stepped shapes and are covered with numerous terraces and balconies. Each terrace is filled with lush greenery, including trees and shrubs, giving the buildings a vertical garden appearance. The buildings are surrounded by city streets, other modern buildings, and a green park area. The lighting suggests early morning or late afternoon, with a warm, golden glow.

- **Food systems + design** as in Carol Coletta's "Memphis Meats" creating lab-grown protein to address food system impacts.

Making Meaning of the SDGS

Sustainable development refers to meeting the needs of the present (with all its problems) without compromising the ability of future generations to meet their own needs, with goals like

- ending poverty and hunger;
- promoting education and health;
- protecting the environment;
- promoting equality and justice.

The Concept of Sustainable Development Goals in Art and Design Studio in the 21st Century

The Sustainable Development Goals (SDGs) are a global call to end poverty, protect the planet, and promote peace by 2030. In today's Art and Design Studio, they inspire learning, expression, and action. Art and design move beyond aesthetics to highlight global issues, spark dialogue, and drive change. Learners explore and respond to the world through creative work, making the SDGs vital to art and design practice.

1. Art and Design as a tool for awareness and advocacy

21st-century art and design studios are spaces where artists create works that

- educate the public on climate change, inequality, health, and justice.
- give voice to marginalised communities.
- promote eco-friendly practices and sustainable lifestyles.

Examples:

Photojournalism image of the flood disaster on June 3, 2015, when flooding caused fuel leakage at the GOIL fuel station near Kwame Nkrumah Interchange, which burned with over 150 people, shops, and vehicles in the vicinity in Accra, Ghana (SDG 13 - Climate Action).



Figure 8.5: *The scene of the petrol station explosion in Accra. Photograph: Christian Thompson/AP*

Figure 8.5 shows a damaged GOIL fuel station after a fire. The station is badly burned, with destroyed vehicles and structures. Some people, including emergency workers in reflective vests, are at the scene, likely checking the damage or helping with cleanup. The entire picture is filled with browns except for the light-coloured sky.

Eiki Danzuka created the Medical Herbman Cafe Project 2021, a 25-meter-long herb garden featuring native herbs like silver vines, Japanese mugwort, and Thunberg's geranium in the form of Leonardo da Vinci's Vitruvian Man. (SDG 3).



Figure 8.6: *Eiki Dantsuka. Medical Herbman Cafe Project 2021, Higashida Oodoori Park. 25-metre-long, human-shaped herb garden. (SDG 3 – Good Health and Well Being).*

Figure 8.6 shows two pictures close to each other, one dominated by brown colour (at the left side) and the other greens (at the right side). The two pictures show the same images in a large outdoor area with the shape of a human figure with stretched arms and opened legs and the figure is outlined on the ground. The figure is divided and outlined in different sections marked with white lines and filled with various materials. Trees, buildings, and roads surround the area, with mountains visible in the background in both pictures.

2. Embedding SDGs into Studio Practice

Art and Design Studios in the 21st century reflect SDG values in several ways:

- Choice of Materials (SDG 12 – Responsible Consumption and Production). Artists are using recycled, biodegradable, or found materials to reduce environmental impact. Designers create products that are durable, reusable, or upcyclable.
- Themes and Concepts (SDG 1, 3, 4, 10, 16). Artworks are used to address themes like poverty (SDG 1), education (SDG 4), health (SDG 3), and peace (SDG 16). Design projects focus on social innovation, such as creating low-cost housing or accessible education tools.
- Collaboration and Community Engagement (SDG 17 – Partnerships for the Goals). Studios now often work with communities, NGOs, and governments to co-create meaningful projects. Art installations and murals in public spaces encourage community dialogue.

3. The Role of Digital and Contemporary Media

21st-century studios embrace technology and multimedia to amplify SDG messages:

- Graphic design spreads awareness through social media campaigns.
- Film and photography document human rights violations or environmental damage.
- Virtual reality (VR) and augmented reality (AR) allow immersive storytelling about SDG challenges.

4. Art Education and SDGs

In art schools and studios, the SDGs are

- integrated into curriculum through projects and exhibitions.
- used to teach critical thinking, empathy, and global responsibility.
- encouraging learners to develop design solutions to real-world problems.

Example: The story about "*The Boy Who Harnessed the Wind*" tells the true story of William Kamkwamba, a Malawian 14-year-old who builds a wind turbine to save his family and village from famine, aligning with SDG 6 – Clean Water and Sanitation.



Figure 8.7: *The boy who harnessed the wind*

Figure 8.7 shows two pictures placed side-by-side, one in full view and the other a close-up view. The pictures show a wide, open outdoor space with low grass and blue sky. In the close-up view at the left, there is a human figure standing at the top of a wooden mast. A bicycle wheel and the structure of a windmill are welded at the top of the mast and close to the person. The other picture at the right shows the full view of the wooden mast and the human figure at the top of it.

5. **Challenges and Opportunities**

   Challenges

   - Limited funding for sustainable art practices.
   - Access to eco-friendly materials can be difficult in developing countries.

   Opportunities

   - Growing demand for ethical design and sustainable branding.
   - Increased global platforms for artists to showcase SDG-inspired work.

Key elements to analyse Art for Sustainable Development messages

Examples of Scenario Artworks and Embedded Sustainable Development Messages

1. **A Painting of a Polluted Lagoon in Accra**

   Actual Meaning: Shows waste and filth in what should be a beautiful natural space.

   Sustainable Message: Highlights the need for responsible waste disposal (SDG 6 – Clean Water and Sanitation).

2. **Sculpture Made from Recycled Materials**

   Actual Meaning: A figure or object made from metal scraps, plastic bottles, or old car parts.

   Sustainable Message: Promotes recycling and creative reuse of waste (SDG 12 – Responsible Consumption and Production).

3. **A mural showing unity across cultures**

   Actual Meaning: Diverse ethnic groups holding hands or working together.

   Sustainable Message: Promotes peace, equality, and social cohesion (SDG 16 – Peace, Justice and Strong Institutions).

Learning Tasks

Task 1: Mini Project for weeks 8 and 9: Art for Sustainable Development
Duration: 4 hours (*Can be divided across the 2 weeks*)
Project Brief/Theme: "Creative Solutions for Sustainable Futures"
This project requires learners to:

1. analyse how existing Ghanaian artworks communicate sustainability.
2. observe environmental challenges in their community to create an innovative artwork addressing specific SDGs using manual and/or digital techniques.
3. document their creative process and intended impact.

Suggested Art Forms and Community Problems (Manual and Digital Options)
(*Groups to choose one approach. Teachers to ensure all approaches are covered*)

1. **Environmental Storytelling Artwork**

   SDG Focus: Climate Action (SDG 13), Life on Land (SDG 15)
   Community Problem: Environmental awareness and conservation

   Manual Approach
   - Create mixed-media collage using recycled materials.
   - Paint or draw using natural pigments on reclaimed surfaces.
   - Construct sculptural/3-D artwork from sustainable materials.

   Digital Approach
   - Design digital illustration or animation showing environmental change.
   - Create interactive digital story with environmental choices.
   - Develop photo manipulation showing future environmental scenarios.

2. **Resource Conservation Awareness Art**

   SDG Focus: Responsible Consumption (SDG 12), Clean Water (SDG 6)
   Community Problem: Wasteful resource use and pollution

   Manual Approach
   - Construct functional items from waste materials.
   - Create textile art using discarded fabrics.
   - Build water filtration demonstration with artistic elements.

   Digital Approach
   - Design infographic posters visualising resource consumption.
   - Create digital photography series documenting waste issues.
   - Develop interactive resource calculator with visual interface.

3. **Cultural Heritage and Sustainability Art**

   SDG Focus: Sustainable Cities (SDG 11), Quality Education (SDG 4)
   Community Problem: Loss of traditional sustainable practices

   Manual Approach
   - Create traditional craft items using sustainable methods.
   - Build miniature models of sustainable traditional architecture/communal spaces.
   - Develop textile works showing traditional environmental knowledge.

   Digital Approach
   - Create digital archive of traditional sustainable practices.

- Design interactive map of local sustainable cultural sites.
- Develop augmented reality experience of traditional techniques in artmaking.

4. Renewable Energy Visualisation

SDG Focus: Affordable Clean Energy (SDG 7) **Community Problem:** Limited understanding of renewable energy

Manual Approach

- Build working solar-powered kinetic sculpture.
- Create manual interactive displays demonstrating energy principles.
- Construct wind or water-powered artistic elements.

Digital Approach

- Design 3D models of renewable energy systems.
- Create digital simulation of energy transformation.
- Develop interactive energy comparison calculator.

Project Structure

Phase 1: Analysis and Research

- Analyse 2-3 Ghanaian artworks containing sustainability themes.
- Observe local environmental challenges.
- Research your chosen SDG and related community issues.
- Decide whether to use manual techniques, digital techniques, or combine both.

Phase 2: Planning

- Select an art form addressing your chosen community problem.
- Plan your artwork with sketches or digital mockups.
- List required materials or digital tools.
- Consider how your chosen medium enhances your sustainability message.

Phase 3: Creation

Create your sustainable development artwork using your chosen approach:

For Manual Creation

- Use locally sourced, recycled, or sustainable materials.
- Apply appropriate traditional techniques.
- Consider the environmental impact of your materials.
- Document your process with photographs.

For Digital Creation

- Use available digital tools (computers, tablets, smartphones).
- Consider energy efficiency in your digital work.
- Plan for appropriate display or sharing methods.
- Save work-in-progress versions.

For Combined Approach

- Determine how manual and digital elements will integrate.
- Create components using appropriate techniques.
- Test integration of different elements.
- Consider how different media enhance your message.

Phase 4: Documentation

Create a presentation including:

- Analysis of studied artworks and SDG connections.
- Explanation of medium choice (manual, digital, or combined).
- Material or tool choices and environmental considerations.
- Intended community impact and display plans.

Assessment Criteria for Hybrid Media Art Project

Criteria	Excellent (8–10)	Very good (5–7)	Satisfactory (3–4)	Needs improvement (1–2)
SDG Connection & Analysis	4 examples connecting art to specific SDGs	3 examples connecting art to specific SDGs	2 examples connecting art to specific SDGs	1 example connecting art to a specific SDG
Technical Execution	4 techniques connecting artwork to specific SDGs	3 techniques connecting artwork to specific SDGs	2 techniques connecting artwork to specific SDGs	1 technique connecting artwork to a specific SDG
Creative Innovation	4 innovative approaches addressing sustainability issues	3 innovative approaches addressing sustainability issues	2 innovative approaches addressing sustainability issues	1 innovative approach addressing a sustainability issue
Community Relevance	4 connections to local sustainability initiatives	3 connections to local sustainability initiatives	2 connections to local sustainability initiatives	1 connection to a local sustainability initiative

Differentiation Strategies

- Allow choice between manual, digital, or combined approaches based on interests and access.
- Provide materials and digital tools at various complexity levels.
- Offer templates or starting points for those needing additional support.
- Ensure both manual and digital workspaces accommodate diverse abilities.

Task 2

Part 1: Visual Analysis - Display one artwork with clear sustainability theme for Learners to complete the following on their worksheet:

- Identify three visual elements (symbols, colours, compositions, materials) that communicate sustainability.
- For each element, explain what specific sustainability concept it represents.

Part 2: Meaning Interpretation (Learners respond to these prompts:)

- Which Sustainable Development Goal(s) does this artwork address?
- What is the artist's probable intention regarding sustainability?
- How effectively does the artwork communicate its sustainability message?

Part 3: Personal Reflection & Response. (Learners complete:)

- How does this artwork change your thinking about sustainable development?
- What emotions does the artwork evoke regarding environmental issues?
- If you could ask the artist one question about their sustainability message, what would it be?

PEDAGOGICAL EXEMPLARS

- Talk for Learning: Identify and discuss the concept of Sustainable Development Goals in Art and Design Studio in the 21st Century.
- Experiential Learning; Problem-Based learning: In convenient groups/ whole classes, take a walk around the community, watch videos and photos to observe and document the state of the individual items and elements in the environment. Examples: schools, villages, towns, cities, industries, forests, water bodies etc.
- Group Work/ Collaboration; Experiential Learning: Select relevant Ghanaian artworks (e.g., from precolonial, colonial, postcolonial, modern and or contemporary times, as well as traditional symbols) to analyse their relevance, in terms of creating

sustainable cities, industries and infrastructure, environment and responsible consumption.

- Problem-Based Learning; Group Work/ Collaborative Learning: In mixed-ability groups analyse and generate an oral/written report on the implications of the observations from the visit to the environment, watching videos and photos on the Sustainable Development Goals (SDGs).

KEY ASSESSMENT

Level 4: Group Project Task

Group Project Task

Select a **real artwork** (or create one) that addresses at least **one Sustainable Development Goal (SDG)** such as clean energy, zero hunger, or reduced inequalities.

Deliverables

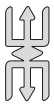
- Written/oral/audio-captioned video **analysis** of the artwork's visual elements and **hidden messages**
- Explanation of **societal and ethical issues** raised
- Discussion on how **censorship or ethical debate** might affect public reaction
- Group **reflection piece**: *What role does art play in promoting sustainability and ethical awareness?*

PLC SESSION 8

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)

c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app

a. The key assessment for the week is ***group project task***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the project (NTS 3k-3q).

10 minutes	**Content Exploration**

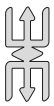
5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then

a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	**Enactment**

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 9

Learning Indicator: *Create innovative artworks and designs on sustainable development using both digital and other media ideations to show the relevance of sustainable living*

FOCAL AREA: INNOVATIVE AND INVENTIVE ARTWORKS THAT PROMOTE SUSTAINABLE DEVELOPMENT

1. *Innovative and inventive artworks that sustain development*
2. *Create artworks using digital media that depict sustainable living.*

INNOVATIVE AND INVENTIVE ARTWORKS THAT SUSTAIN DEVELOPMENT

Innovative works in art and design that sustain development have strengths across multiple dimensions. At a glance it may seem that their strengths lie in just economics because many examples highlighted globally have economic dimensions, but sustainable development requires balancing several interconnected factors. Innovative concepts in art and design sustain development in them.

Environmental strengths, where resource conservation, ecosystem restoration, and climate action are needed. In that sense, innovations like Julia Lohmann's seaweed installations promote resource conservation, while Mel Chin's "Revival Field" uses plants to extract heavy metals from contaminated soil. Studio Roosegaarde's "Smog Free Tower" reduces air pollution and raises awareness about air quality issues.



Figure 9.1: *Mel Chin. Revival Field, 1991. Pig's Eye Landfill, St. Paul, Minnesota. Plants, and industrial fencing on a hazardous waste landfill; approximately 60 x 60 x 9 feet. Courtesy of the artist.*

Figure 9.1 shows an open area covered by green vegetation. There is a rectangular fence at the centre of the picture. Inside this enclosure, there is a large circular structure, neatly divided into four sections. Each section contains some plants.

Social strengths in community cohesion, knowledge preservation, and accessibility where Theaster Gates' Dorchester Projects enhances community cohesion by transforming abandoned buildings into cultural spaces, while El Anatsui's bottle cap tapestries preserve traditional weaving techniques while creating contemporary art, and inclusive design projects such as IKEA's ThisAbles provide accessibility for disabled individuals.

Cultural strengths in identity affirmation, heritage preservation, and value transformation for the likes of Selly Raby Kane's Afrofuturist fashion to celebrate Senegalese culture and sustainable futures, while Ahmad Angawi's "Al Mangour" installations preserve traditional Hijazi screens and Lucy and Jorge Orta's "Food" projects transform cultural perceptions about waste and reuse.



Figure 9.2: *The Alien Bride. Image retrieved from Selly Raby Kane's Instagram.*

Figure 9.2 shows a picture of a tall model in a unique outfit. The top of the outfit has intricate patterns and cut-outs. It also has a large, cage-like skirt surrounding the model's lower body. This skirt is made of multiple vertical and horizontal bars, creating a three-dimensional effect. In the background is an audience seated and watching attentively. The text "SIKAADU Photography" appears in the corner, crediting the photographer, which is common in professional fashion photography.

Institutional Strengths in policy influence, educational impact, and governance innovation where Forensic Architecture's investigative design addresses environmental justice in legal proceedings, while Michael Rakowitz's "Enemy Kitchen" uses cooking to bridge cultural divides and teach about food systems. Indy Johar's Dark Matter Labs designs new institutional frameworks for climate adaptation.

Innovative and Inventive Artworks

- Innovative artworks use new ideas, techniques, or materials to communicate messages or solve problems.
- Inventive artworks are creative solutions that often involve recycling, technology, or interactive features.
- These types of artworks can inspire action, solve community problems, or raise awareness, contributing to sustainable development.

Creating Economic Opportunities

- **The Agbogbloshie Makerspace Platform (AMP)** in Ghana works with local craftspeople to transform electronic waste into new products through skill-building and technology.
    - **SDG Link:** SDG 8 – Decent Work and Economic Growth, SDG 11 - Sustainable Cities and Communities and SDG 12 - Responsible Consumption and Production.
- **Dave Hakkens' "Precious Plastic"** provides open-source machinery blueprints enabling communities worldwide to establish small-scale plastic recycling workshops.
    - SDG Link: SDG 8 – Decent Work and Economic Growth, SDG 11 - Sustainable Cities and Communities and SDG 12 - Responsible Consumption and Production.



Figure 9.3: *Dave Hakken: 2020. Recycling initiative Precious Plastic's open-source machines were used to recycle plastic and turn it into face shields, respirator masks and hands-free door handles to fight coronavirus.*

Figure 9.3 is a picture that shows different components used to create a face shield - protective gear that covers the face. On the left side is a transparent plastic sheet attached to a black headband. In the centre, there is a pile of small black pellets. On the right side, many black headbands stacked together, similar to the one on the transparent shield. All are placed on a light grey background.

- **Francis Kéré's architectural projects** use local materials and labour in Burkina Faso, creating buildings that serve communities while training local craftspeople.

- **SDG Link**: SDG Link: SDG 8 – Decent Work and Economic Growth, SDG 12 - Responsible Consumption and Production, SDG 13 - Climate Action, SDG 15: Life on Land



Figure 9.4: *Schorge college, Koudougou (Burkina Faso), 2016, Diébédo Francis Kéré*

Figure 9.4 shows a picture of a building that blends modern features with natural materials. The front of the building is made up of vertical wooden poles. The roof has two large, triangular structures that appear to allow for air or natural light. In front of the building, several bicycles are parked. Some bicycles are standing upright, while others are lying on the ground.

- **Studio Swine's "Can City"** mobile foundry enables waste collectors in São Paulo to transform aluminium cans into designed objects
- **SDG Link:** SDG Link: SDG 8 – Decent Work and Economic Growth, SDG 12 - Responsible Consumption and Production, SDG 13 - Climate Action, SDG 15: Life on Land.



Figure 9.5: *Studio swine transport mobile foundry to create can city.*

Figure 9.5 shows a picture of the following items:

- **Large Metal Container (Left side):** This cylindrical container is mounted on a wheeled frame and has handles on top.

- **Funnel and Tall Pipe:** Materials might be poured into the container through this funnel.
- **Mechanical System (Centre):** This includes a motor, pipes, and levers that work together to drive the device's operation.
- **Control Box:** A black box with switches or buttons.
- **Wooden Crate with Orange Straps:** It is positioned on the right side of the picture.
- **Cylindrical Objects in a Grid Pattern (Front):** These could be cans or small containers.



Figure 9.6: *A collection of life-size aluminium stools cast from soda cans.*

Figure 9.6 shows a picture of five stools from aluminum cans. These stools have different shapes and designs, with creative patterns on their seats. Some are round, others have unique textures, and their legs are made of strong aluminum rods. The image is labelled "Can City Stools".

Improving Resource Management

- **Warka Water towers** by Arturo Vittori collect atmospheric moisture in Ethiopia, providing water in regions with limited infrastructure.
    - **SDG Link: SDG Link:** SDG 8 – Decent Work and Economic Growth, SDG 12 - Responsible Consumption and Production, SDG 13 - Climate Action, SDG 15: Life on Land.



Figure 9.7: *Sheep around Warka, Warka Water, Dorza, Ethiopia.*

Architecture and Vision / Arturo Vittori (architect and photographer)

Figure 9.7 shows a picture of a group of sheep grazing in a green field, with a striking orange structure standing prominently in the centre. The structure is tall and bottle-shaped, made of a network framework that appears to be metal or another sturdy material. Its intricate design extends upwards, and opening outward at the top, while the base rests on a gravel surface.

- **Litre of Light** transforms waste bottles into solar-powered lighting solutions for communities without reliable electricity.
    - SDG Link: SDG Link: SDG 8 – Decent Work and Economic Growth, SDG 12 - Responsible Consumption and Production, SDG 13 - Climate Action, SDG 15: Life on Land.



Figure 9.8: *Plastic bottles are put in shanty home roofs to provide light. Photograph: Sunshine Deleon*

Figure 9.8 shows a picture of a group of white bottles arranged against a solid black background, creating a stark contrast that makes the bottles stand out. The bottles are shiny and uniform in shape. They are positioned neatly and clustered together. The lighting enhances the brightness of the bottles, making their smooth surfaces and contours more visible.

- **Notpla** (formerly Ooho) by Rodrigo García González and Pierre Paslier creates seaweed-based packaging alternatives to plastic.
    - **SDG Link:** SDG Link: SDG 8 – Decent Work and Economic Growth, SDG 12 - Responsible Consumption and Production, SDG 13 - Climate Action, SDG 15: Life on Land.
- **The Ocean Cleanup's systems** address plastic pollution in rivers and oceans through innovative design approaches.
    - SDG Link: SDG Link: SDG 8 – Decent Work and Economic Growth, SDG 12 - Responsible Consumption and Production, SDG 13 - Climate Action, SDG 15: Life on Land.

SUPPORTING SUSTAINABLE COMMUNITIES

- **Marjetica Potrč's participatory projects** transform urban spaces into community resources through collaborative design.
- **Diana Scherer's "Interwoven"** explores plant root systems as a sustainable material for textiles.
- **Urban-Think Tank's "Metro Cable"** in Caracas combines transportation infrastructure with community spaces.
- **Assemble Studio's "Granby Workshop"** revitalises neighbourhoods through community-made architectural elements.

Others include

- El Anatsui – Recycled Bottle Cap Sculptures



Figure 9.9: *El Anatsui. Wall. Museum of Contemporary Art, San Diego.*

Figure 9.9 shows a picture of a contemporary art installation in a gallery. The room features large, hanging sheets made from what appears to be woven or linked metallic materials, possibly recycled metal or foil, with some colourful elements interspersed. The sheets hang from the ceiling and drape onto the polished wooden floor, creating semi-transparent walls that divide the space. Two people are walking through the installation. The lighting is bright and even, highlighting the texture and reflective quality of the materials.

Medium: Discarded bottle caps, metal, wire.

Innovation: Transforms waste into large, beautiful wall hangings

- SDG Link: SDG Link: SDG 8 – Decent Work and Economic Growth, SDG 12 - Responsible Consumption and Production, SDG 13 - Climate Action, SDG 15: Life on Land.

Message: Promotes recycling and challenges consumer waste culture.

- Ibrahim Mahama – upcycling techniques for discarded trade, institutional and historical objects



Figure 9.10:*Example of an upcycling installation*

Figure 9.10. This is a wide outdoor shot of a massive, rectangular building on a city corner under a bright, clear blue sky. The entire building is unusually covered, as if it were an art installation, with huge sheets of fabric. The corner and one visible side are wrapped in a dark, wrinkly, navy-blue cloth. The other visible side is sheathed in a dense, earthy-brown patchwork of what looks like coarse burlap or jute. Scattered across the blue fabric are numerous decorative patches, many resembling stylized, circular masks with cut-outs. The base of the building is surrounded by red-and-white construction barriers on a city street with traffic lights.

Medium: Old cocoa sacks sewn together and used to cover buildings, repurposed shoemaker boxes and sewing machines, etc.

Innovation: Uses materials from Ghana's trade systems to question labour and economic inequality.

- SDG Link: SDG Link: SDG 8 – Decent Work and Economic Growth, SDG 12 - Responsible Consumption and Production, SDG 13 - Climate Action, SDG 15: Life on Land

Message: Explores themes of globalization, labour, and economic justice.

- Mural Art for Health Campaigns

Medium: Wall paintings in schools, hospitals, and communities.

Innovation: Use of bright, relatable art to communicate health tips (e.g., hand washing, malaria prevention).

SDG Link: SDG 3 – Good Health and Well-being

Message: Educates people in a visual, accessible way

Simple innovative art ideas for high school learners

Here are some project ideas to create impactful, sustainable art!

Project Idea	Materials	SDG Focus	Development Message
Collage on Climate Change	Old newspapers, leaves, plastic	SDG 13 – Climate Action	Highlight the effects of pollution and global warming
Plastic Bottle Garden Sculptures	Used bottles, wire, paint	SDG 15 – Life on Land	Promote reforestation and beautification
Upcycled Fashion Design	Old clothes, fabrics	SDG 12 – Responsible Consumption	Promote reuse in fashion
Mural on Peace and Unity	Paint, wall surface	SDG 16 – Peace, Justice	Encourage community harmony and cultural pride
Mini Solar Lamp Prototype	Reused bulbs, wires, solar panels	SDG 7 – Affordable Energy	Promote clean energy ideas for rural areas

Creating artworks using digital media that depict sustainable living

How to create digital art about sustainable living

Step 1: Choose a Sustainable Development Theme

Pick one or more of the Sustainable Development Goals (SDGs). Here are a few ideas:

SDG	Art Topic Ideas
SDG 6 – Clean Water	Design a poster on saving water at home
SDG 13 – Climate Action	Draw a digital image showing trees fighting pollution
SDG 12 – Responsible Consumption	Create an infographic on "Say No to Plastic"
SDG 11 – Sustainable Cities	Design a clean, green Ghanaian city of the future
SDG 15 – Life on Land	Show a forest being protected by young people

Step 2: Plan Your Artwork

- What message do I want to send?
- Who is my audience? (e.g., students, parents, community)
- What images or symbols will I use? (e.g., trees, recycling bins, happy families)
- What colours suit the mood? (Green for nature, blue for water, red for warning)

Make a rough sketch on paper before going digital.

Step 3: Choose Your Digital Tool

Purpose	Tools
Drawing	CorelDRAW, Adobe Illustrator, IbisPaint X, SketchBook, MediBang Paint
Poster Design	CorelDRAW, Adobe Illustrator, Canva, Adobe Spark, Desygner
Photo Editing	Pixlr, Snapseed
Animation	Flipaclip, CapCut, Canva Pro (basic animation)
Infographics	CorelDRAW, Adobe Illustrator, Canva, Piktochart

Note: Start simple! Canva is a great beginner tool for posters and digital art.

Step 4: Create Your Artwork

- Use symbols and text to make your message clear.
- Focus on clean layouts – don't overcrowd your design.
- Combine photos, drawings, and icons to show your ideas.
- Add local relevance – include Ghanaian elements like kente patterns, markets, local foods, or landscapes.

Step 5: Share and Reflect

- Show your work to classmates or on social media (with a teacher's or parent's guidance).
- Explain your message and the SDG it relates to.
- Encourage others to take action or ask questions.

Creative Project Ideas for Learners

Project Title	Description	Tools
"Green Ghana" Digital Poster	Design a poster showing how to plant and protect trees	Canva, SketchBook
"Say No to Plastic" Collage	Combine photos and drawings to highlight plastic waste	Pixlr, Canva
Animated Story: "Water for All"	Create a short animation about saving water	Flipaclip, CapCut
SDG Social Media Art Challenge	Design Instagram-style digital posters on 3 SDGs	Canva, Adobe Express
"My Clean Community" Digital Drawing	Illustrate a clean, peaceful future community	IbisPaint X, MediBang

Take note

- Keep your message simple and clear.
- Use bold visuals and colour to attract attention.
- Always credit sources if you use online images.

- Be original – share your ideas.
- Practice regularly – digital skills improve over time.

Learning Tasks

Task 1: ***Refer to Mini Project for weeks 8 and 9: Art for Sustainable Development***

PEDAGOGICAL EXEMPLARS

- Talk for Learning: In a general class interaction, share experiences about futuristic ideas and product design for Sustainable Development Goals (SDGs).
- Project-Based Learning: Design and produce innovative artworks and designs centred on sustainable development using both digital and other media ideations.
- Group Work/Collaborative Learning; Experiential Learning: In small groups select and use practical solutions to improve on an existing art/design product.
- Group Work/Collaborative Learning: In gender-balanced groups, identify possible resources in the environment that can be used in digital mixed media 21st-Century futuristic ideations and product design.

KEY ASSESSMENT

Level 4: Project-Based Task

Create a series of artworks (minimum; 2 pieces: 1 digital and 1 mixed/traditional) around the theme:

"Innovative Living: Art for a Sustainable Future".

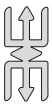
Each group must:

1. Identify and explain the sustainable issue addressed (e.g., water conservation, eco-fashion, renewable energy).
2. Use recycled, eco-safe, or symbolic materials.
3. Apply design thinking in developing meaningful visuals.
4. Present a short digital or oral presentation or sign language explaining:
   - Their creative process
   - Materials used
   - Message behind each artwork
   - Intended impact on the viewer/community

PLC SESSION 9

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app
   a. The key assessment for the week is ***project-based task***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the project (NTS 3k-3q.

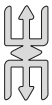
10 minutes	Content Exploration

5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then
   a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 10

Learning Indicator: *Create innovative artworks and designs on sustainable development using both digital and other media ideations to show the relevance of sustainable living*

FOCAL AREA: INNOVATIVE AND INVENTIVE ARTWORKS THAT PROMOTE SUSTAINABLE DEVELOPMENT

1. *Innovative and inventive artworks that sustain development*
2. *Create artworks using digital media that depict sustainable living.*

INNOVATIVE ARTWORKS FOR SUSTAINABLE DEVELOPMENT

Global and Ghanaian Examples

Here are some examples that show how artists in Ghana and other parts of the world have use diverse approaches to address sustainability challenges through innovative artworks.

SDG 6: Clean Water

- **Serge Attukwei Clottey's "Afrogallonism"** (Ghana): Transforms yellow plastic water containers into tapestries addressing water access
- **Olafur Eliasson's "Little Sun Water"** (Denmark): Solar-powered water purification device doubling as illuminated art object

SDG 11: Sustainable Cities

- **Ibrahim Mahama's building installations** (Ghana): Covers structures with cocoa jute sacks highlighting urban labour conditions.
- **Agnes Denes' "Wheatfield"** (USA): Transformed Manhattan landfill into productive wheat field challenging urban land use.

SDG 12: Responsible Consumption

- **El Anatsui's bottle cap tapestries** (Ghana): Creates shimmering sculptures from discarded metal bottle caps.
- **Aurora Robson's plastic waste sculptures** (Canada): Transforms plastic pollution into illuminated biomorphic installations.

SDG 13: Climate Action

- **Bright Ackwerh's climate change murals** (Ghana): Public art depicting climate impacts on coastal communities.

- **Olafur Eliasson's "Ice Watch"** (Denmark): Displayed melting Greenland ice blocks in public spaces making climate change tangible.

SDG 14: Life Below Water

- **Paa Joe's fantasy coffins** (Ghana): Creates fish-shaped ceremonial coffins highlighting ocean conservation and fishing traditions.
- **Jason deCaires Taylor's underwater sculptures** (UK): Creates submerged concrete figures forming artificial reefs for marine life.

SDG 15: Life on Land

- **MESH Ghana's "Seed Bombs"** (Ghana): Clay spheres containing native seeds for reforestation, displayed as art before deployment.
- **Andy Goldsworthy's natural installations** (UK): Creates ephemeral sculptures from natural materials highlighting ecosystem fragility.

Creating artworks using digital media that depict sustainable living

Mini-Project: Digital and Manual Art for Sustainable Development

Title: "Dual Perspectives: Creating Hybrid Artworks for SDG Awareness"

Duration: 2 hours *(can be extended after the class)*

Project Brief/Theme: "Visualising Sustainable Futures"

Create a hybrid artwork that combines manual and digital elements to address a specific Sustainable Development Goal relevant to your community. Your work should communicate both problems and solutions related to your chosen SDG.

Suggested Materials *(learners can add relevant materials to the suggested ones)*

Manual Materials

- Drawing materials (pencils, charcoal, markers)
- Collage materials (magazines, newspapers, scissors, glue)
- Coloured pencils or paints
- A4 or A3 paper/cardboard

Digital Tools

- Mobile phones with cameras
- Computers/tablets (if available)
- Free software options: GIMP, Krita, Canva, Pixlr
- Mobile apps: Adobe Express, Autodesk SketchBook

SDG Focus Areas *(learner are to choose one of the focal areas but are free to generate their own ideas)*

1. **Water Conservation (SDG 6)**

   Local Context: Depict traditional and modern water harvesting methods in Ghana.

   Visual Approach: Create a split artwork showing water scarcity and conservation solutions.

2. **Waste Management (SDG 12)**

   Local Context: Address plastic pollution in urban areas.

   Visual Approach: Show transformation of waste materials into useful products.

3. **Climate Action (SDG 13)**

   Local Context: Illustrate deforestation impacts and reforestation efforts.

   Visual Approach: Create before/after imagery of local landscapes.

4. **Sustainable Cities (SDG 11)**

   Local Context: Urban farming and green spaces in Ghanaian cities.

   Visual Approach: Design visionary urban planning incorporating traditional elements.

Project Structure

Phase 1: Research and Planning (25 minutes)

Activity: SDG Research and Concept Development

- Select one SDG focus area.
- Research specific local challenges and solutions.
- Sketch initial concept showing:
  - What aspect of the SDG you will address.
  - How you'll divide work between manual and digital elements.
  - What visual message you want to communicate.

Phase 2: Manual Creation

Activity: Creating Manual Foundation

Create the hand-made elements of your artwork:

- Draw, paint or collage elements representing your chosen SDG.
- Focus on creating authentic, expressive elements that show the human dimension.
- Consider incorporating traditional Ghanaian visual elements or symbols.

- Leave space or plan for digital integration.

Phase 3: Digital Enhancement

Activity: Digital Integration

Transform your manual work through digital means:

- Photograph your manual artwork.
- Use digital tools to:
  - Add data visualisation elements (simple graphs, statistics);
  - Incorporate text or informational elements;
  - Create contrast between traditional and modern solutions;
  - Add visual effects that enhance your sustainability message.
- Print and reincorporate digital elements if possible, or finalise as digital file.

Phase 4: Documentation

Activity: SDG Connection Statement

Create a brief documentation including:

- Title of artwork and SDG addressed.
- Explanation of manual and digital techniques used.
- How your artwork connects to real community challenges.
- Reflection on how combining manual and digital elements strengthens your message.

Assessment Criteria

Criteria	Excellent (17-20)	Very Good (13-16)	Satisfactory (9-12)	Needs Improvement (1-8)
Artwork Relevance to SDG	Strong alignment with specific SDG with clear explanation	Clear SDG connection with some detail	Present but vague SDG connection	Weak or unclear SDG relevance
Visual Analysis & Technique	Excellent integration of manual and digital elements	Good balance of techniques with clear purpose	Basic combination of techniques	Poor integration of different media
Societal & Ethical Issues	Clearly identifies local sustainability challenges	Issues identified with some relevance	Underdeveloped discussion	Lacks clarity on issues

Criteria	Excellent (17-20)	Very Good (13-16)	Satisfactory (9-12)	Needs Improvement (1-8)
Innovation & Creativity	Highly creative approach to sustainability visualisation	Some creative elements and original thinking	Standard approach with little innovation	Lacks creativity
Process Documentation	Thorough documentation of process and SDG connection	Good explanation of choices and message	Basic documentation	Incomplete or unclear documentation

Example Project Approaches

Example 1: Water Conservation Collage-Digital Hybrid

Manual Component: Collage using newspaper clippings and hand-drawn elements showing traditional Ghanaian water collection methods.

Digital Enhancement: Add digital overlay showing water scarcity data, rainfall patterns, and conservation solutions.

Final Output: Printed composite artwork with both elements, or digital presentation showing both components.

Example 2: Waste Management Before/After

Manual Component: Split-page drawing showing a polluted beach/riverbank

Digital Component: Digitally transform half the image to show the same location after community clean-up and recycling initiatives.

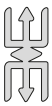
Final Output: Side-by-side comparison highlighting transformation possibilities

Example 3: Climate Action Data Visualization

Manual Component: Hand-painted tree or forest scene using traditional techniques

Digital Component: Add digital elements showing deforestation statistics and growth projections.

Final Output: Hybrid artwork where expressive painting meets factual data



Notes

- Emphasise research before creation to ensure accurate SDG representation.
- Encourage learners to address local issues they've personally observed.
- Provide examples of how manual and digital techniques offer different strengths.
- For learners with limited technology access, focus on simple digital enhancements.

- Consider creating a class exhibition where artworks address multiple SDGs.
- Connect project to UN SDG resources and global sustainability initiatives.

Learning Tasks

Step 1: Rapid Concept (5 minutes)

Choose ONE sustainable development focus from the options below:

- Reducing plastic waste
- Water conservation
- Energy efficiency
- Food sustainability
- Reducing textile waste

On your paper, quickly sketch a symbol or simple image that represents your chosen sustainability focus

Step 2: Mixed Media Enhancement (7-8 minutes)

Transform your sketch by:

- Using at least one waste material to add texture or dimension to your sketch.
- Take a photo of your enhanced sketch with your mobile device.
- Use a simple drawing/photo app to add one digital element (text, digital drawing, filter, or effect) that strengthens the sustainability message.

PEDAGOGICAL EXEMPLARS

- **Talk for Learning:** In a general class interaction, share experiences about futuristic ideas and product design for Sustainable Development Goals (SDGs).
- **Project-Based Learning:** Design and produce innovative artworks and designs centred on sustainable development using both digital and other media ideations.
- **Group Work/Collaborative Learning;** Experiential Learning: In small groups select and use practical solutions to improve on an existing art/design product.

KEY ASSESSMENTS

Level 4: Project-Based Task

Create a **series of artworks** (min. 2 pieces: 1 digital and 1 mixed/traditional) around the theme:

"Innovative Living: Art for a Sustainable Future"

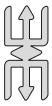
Each group must:

1. Identify and explain the sustainable issue addressed (e.g., water conservation, eco-fashion, renewable energy)
2. Use **recycled, eco-safe, or symbolic materials**
3. Apply design thinking in developing meaningful visuals
4. Present a short **digital or oral or make a sign language presentation** explaining:
   - **a.** Their creative process
   - **b.** Materials used
   - **c.** Message behind each artwork
   - **d.** Intended impact on the viewer/community

PLC SESSION 10

45 minutes	Planning & Reviewing the Learning Plan

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2. Use your subject specific app to explore the content before planning. Ask the app to
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   - **b.** identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   - **a.** suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
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   - **c.** review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app

a. The key assessment for the week is ***project-based task***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the project (NTS 3k-3q).

10 minutes	Content Exploration

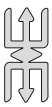
5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then

a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 11

Learning Indicator: *Design and create artwork based on the message of sustainability using biodegradable and 80% recyclable waste materials*

FOCAL AREA: DESIGNING AND CREATING ARTWORKS WITH BIODEGRADABLE AND RECYCLABLE MATERIALS

1. *Analysing existing artworks that talk about sustainable developments*
2. *Identify and assemble biodegradable materials that can be used in creating an artwork*

INTRODUCTION TO BIODEGRADABLE MATERIALS IN ART

Biodegradable Materials in Art

Biodegradable materials are natural substances that break down safely into the environment. Bacteria and fungi help turn them into harmless things like carbon dioxide, water, and organic matter. Though they use resources, they give back to nature at the end of their life. In art, using biodegradable materials shows a strong commitment to nature and sustainability. These materials break down without harm and support the idea of a circular economy. Artists using them do not just talk about sustainability, they practise it through their work. This method links directly to the Sustainable Development Goals, especially SDG 12 (Responsible Consumption) and SDG 15 (Life on Land). Biodegradable art often fades over time, reminding us of nature's cycles and challenging the idea that art must last forever.

Biodegradable materials are important in art because they

- reduce waste and pollution;
- promote environmentally friendly practices;
- encourage creative reuse of natural materials;
- support sustainable development (especially SDGs 12, 13, and 15);
- help protect the environment and educate others on eco-friendly living.

Notable Examples

Andy Goldsworthy's ephemeral sculptures and land art using leaves, sticks, ice and soil demonstrate how natural materials can create striking visual compositions while intentionally embracing decay as part of the artistic process.

Andy Godworthy:

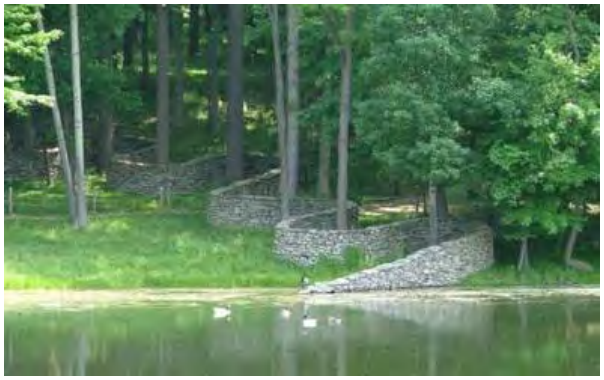


Figure 11.1 (left): *Stone wall at the Storm King art centre in New York.*



Figure 11.2 (right): *Woven branch circular arch at Dumfrieshire.*

Figure 11.1 (left) shows a natural scene with green grass and a variety of trees. The landscape is rich with vegetation. The trees vary in size and shape, some standing tall while others form a thick canopy. Sunlight filters through the foliage, casting shadows on the ground, adding depth and contrast to the scene.

Figure 11.2 (right) shows the picture of a landscape dominated by earthy brown tones, with dry trees scattered throughout the scene. Most of the trees have no leaves. The ground is covered with dried leaves. Some of the dried branches have been interlocked to create a circular shape in the middle of the picture.

Janine Antoni's iconic work "Gnaw" features two 600-pound cubes, one of chocolate and one of lard, which the artist bit and chewed herself. These biodegradable materials were then transformed into lipsticks and chocolate boxes, commenting on consumption, commodification, and the body's relationship with organic substances.



Figure 11.3: *Janine Antoni, Gnaw 1992. Hard chocolate and lard with artists tooth marks from chewing.*

Figure 11.3 shows a picture of two structures composed of two distinct blocks—a dark brown and a solid yellow segment—positioned on rectangular platforms. Each of the structures are placed on three rectangular slabs/tiles, ensuring their support.

Ibrahim Mahama from Ghana transforms biodegradable jute sacks (previously used for cocoa and charcoal transportation), wood, soil and woven textiles into monumental installations that address global trade, labour and material cycles.



Figure 11.4: *Ibrahim Mahama, Vanishing Points. 2020. Soil, Discarded Wheelbarrows*

Figure 11.4 shows brown wheelbarrows positioned in an indoor setting that is filled with sand. Five of the wheelbarrows have been turned upright with deposits of sand at the base. Many of the wheelbarrows are heaped at a corner of the room. They appear sturdy but old. Their earthy tones blend naturally with the sandy foreground.

Victor Grippo from Argentina pioneered the use of potatoes as art materials, creating installations where the vegetables generate small amounts of electricity, demonstrating energy potential in organic materials while addressing sustainability in Latin American contexts.



Figure 11.5: *Victor Grippo, Analogia I, 2013. Photo © President and Fellows of Harvard College.*

Source: Harvard Art Museum. https://harvardartmuseums.org/collections/object/336163

Figure 11.5 shows a total of 40 large potatoes arranged in two separate 5x4 grids. Each potato is connected by metal strips and wires to create a circuit. In the centre, a voltmeter is hooked up to measure the electrical output. Next to it, a piece of paper provides key details about the experiment. The text on the paper references an artwork by New Zealand artist Michael Stevenson, who used a potato battery to power a radio transmitter that broadcast his essay on the historical significance of potatoes in New Zealand. The notes further detail the electrical output of the potatoes, comparing their voltage generation to standard household batteries, showing how stacking layers can boost the power.

Tasha Lewis creates butterfly installations using cyanotype-printed cotton that eventually breaks down, addressing both pollinator decline and textile waste through ephemeral public art.



Figure 11.6: *Tasha Lewis, The swarm. 2011–2015.*

Figure 11.6 shows a picture of an art installation in a gallery or an art exhibition space. The installation features numerous flying creatures, hanging in a curvy pattern from the ceiling, creating an effect of movement and flow. The creatures are mainly blue and black.

Below the suspended creatures, sculptures of various animals—including dogs and deer—appear to be leaping or running. These animal figures are also rendered in shades of blue and black, tying them to the creatures above.

Portia Munson's "Garden" installations incorporate living plants alongside biodegradable found objects, creating immersive environments that evolve and decompose throughout exhibition periods.



Figure 11.7: *Portia Munson's installation The Garden (1996), presented in the Meridians sector at Art Basel Miami Beach 2019 by P.P.O.W.*

Figure 11.7 shows a picture of different colourful fabrics woven/bonded together and draped downward in front of furniture. The lower part of the picture shows pictures of grape-like fruits in purple and violet. There are floral designs in the entire composition. A lady in a dark brown dress is observing the composition.

Bea Fremderman uses fermenting vegetables and growing fungi as sculptural materials, creating living artworks that actively change throughout exhibitions while exploring food systems and decomposition cycles.



Figure 11.8: *Bea Fremderman. Chia Clothing (Germinating chia on abandoned clothesline). 2019.*

Figure 11.8 presents a picture of three clothes hanging on a drying line in a room. The garments appear to be a mix of casual everyday wear, including a long-sleeved shirt, trouser, and a sleeveless shirt. The colours range from light to dark tones, creating a contrast against the background. There are deposits on greenish substances on each of the clothes. The room is grey-coloured.

These artists emphasise the versatility of biodegradable materials as both medium and message, illustrating their commitment to sustainability. By selecting materials that eventually return to the earth, they make significant statements about ecological cycles, resource use, and human relationships with natural systems.

Biodegradable Materials Available in Ghana

Here are biodegradable materials commonly found in Ghana that can be used in art:

Material	Source	Artistic Use
Coconut husk and shells	Coconut sellers, farms	weaving mosaic, craft
Palm fronds	Palm trees	Weaving, decorations
Calabash (gourd)	Farms, markets	Carving, painting, containers
Plantain and banana fibre	Plantain/banana trees	Paper-making, weaving
Shea nut shells	Northern Ghana	Craft items, texture art
Jute sacks (cocoa sacks)	Cocoa industry	Installation art, collage
Corn husks and cobs	Farms, kitchens	Dolls, wall art, 3D pieces
Dry leaves and twigs	Forest areas, schools	Collage, eco-paint brushes
Clay and earth	Natural soil	Pottery, murals, 3-D artworks
Recycled paper	Used notebooks, newspapers	Papier-mâché, paper beads

Types of Biodegradable Art Projects

Art Type	Description	Example
Eco-Collage	Use dried leaves, bark, paper, and seeds to make wall art	"Save Our Trees" poster made from leaves and reused cardboard
Sculpture	Create 3D forms using coconut shells, clay, or gourds	A bird sculpture made from corn cobs and clay
Textile Art	Weave with banana fibre, palm leaves, or jute	Wall hanging made from palm fronds
Pottery	Use local clay to make eco-friendly bowls, pots	Clay water pot with African patterns
Natural Dye Painting	Use plant-based dyes to paint on cloth or calabash	Kente-style cloth painting with dye from hibiscus or charcoal

Notes on Working with Biodegradable Materials

- Dry materials properly to avoid rot or mould.
- Combine natural glue or starch paste for joining.
- Experiment with shapes and textures—nature offers variety!
- Use local tools and traditional techniques like weaving or carving.]

Connecting Art to Sustainable Development Goals (SDGs)

Biodegradable art helps address these goals:

SDG	Connection
SDG 12 – Responsible Consumption	Using natural materials reduces waste and overconsumption
SDG 13 – Climate Action	Avoids plastics and promotes eco-awareness
SDG 15 – Life on Land	Encourages protection of forests and natural resources
SDG 8 – Decent Work	Promotes creative local crafts and sustainable jobs



Figure 11.9: *Poster on biodegradable art addressing SDG Goals*

Figure 11.9 shows an Infographic with four coloured rows, each representing a Sustainable Development Goal (SDG) and its connection to biodegradable art.

- The first row is yellow, labelled "12 Responsible Consumption," with an infinity loop icon and a sprouting plant. The connection reads: "Using natural materials reduces waste and overconsumption."
- The second row is green, labelled "13 Climate Action," with a globe and hand icon. The connection reads: "Avoids plastics and promotes eco-awareness."
- The third row is olive green, labelled "15 Life on Land," with a tree and animal icon. The connection reads: "Encourages protection of forests and natural resources."
- The fourth row is orange, labelled "8 Decent Work," with a handcraft bowl icon. The connection reads: "Promotes creative local crafts and sustainable jobs."

Classroom Project Ideas

Here are projects you can do in school or as an art assignment:

"Nature Speaks" Collage – Use leaves, twigs, and dry flowers to create a poster on deforestation.

"My Eco-Village" Diorama – Build a miniature village using jute, clay, coconut shells, and banana stems.

Calabash Face Masks – Paint expressive faces on dried calabash for display or drama performance.

Palm Fan Art – Decorate traditional palm fans with natural dyes and proverbs about sustainability.

Clay Story Plates – Use clay to create plates that tell stories of village life and farming.

Creating an artwork using biodegradable materials

Mini Project for week: Sustainable Art from Biodegradable Materials

Project Title: "Eco-Innovation: Art for Sustainable Futures"

Duration: 2 hours

Project Brief/ Theme: "Transforming Waste into Sustainable Messages"

This project requires learners to create innovative 2-D or 3-D artworks that address specific Sustainable Development Goals using primarily biodegradable and recyclable waste materials.

learners will work in small groups to analyse existing sustainability-focused artworks before creating their own pieces that communicate environmental messages.

Suggested Materials

- Collection of images showing sustainability-themed artworks
- Biodegradable materials (paper waste, food packaging, plant materials, etc.)
- Recyclable waste materials (plastic bottles, leather scraps, metal cans, textile scraps, etc.)
- Natural adhesives (cassava starch paste, natural gums)
- Basic tools (scissors, knives, string, wire)
- Documentation materials (paper, pens, cameras if available)

Project Structure

Activity 1: Sustainability Art Analysis

- In small mixed-ability groups, analyse 2-3 examples of artworks addressing sustainability.
- Identify materials used, environmental messages communicated, and artistic techniques.
- Connect artworks to specific Sustainable Development Goals.

Activity 2: Project Planning

- Groups select one SDG to focus on from the following options:
  - SDG 6: Clean Water and Sanitation
  - SDG 12: Responsible Consumption and Production
  - SDG 13: Climate Action
  - SDG 14: Life Below Water
  - SDG 15: Life on Land
- Brainstorm concepts for artwork addressing their chosen SDG.
- Plan material needs and construction approach.

Phase 2: Material Collection and Processing

Activity: Material Gathering and Preparation

- Groups collect pre-sorted biodegradable and recyclable materials.
- Process materials as needed (cutting, shaping, etc.).
- Test construction methods and material combinations.
- Ensure at least 80% of materials are biodegradable or recycled.

Phase 3: Artwork Creation

Activity: Sustainable Art Creation

Learners create their SDG-focused artwork using one of these suggested approaches ot can develop their own concepts:

Option 1: Relief Collage with Natural Elements

- Create a textured relief artwork on recycled cardboard backing.
- Incorporate layers of biodegradable materials showing environmental transitions.
- Add symbolic elements representing solutions to environmental challenges.
- Include clear visual messaging about the selected SDG.

Option 2: Functional Eco-Sculpture

- Transform waste materials into a functional object (container, tool, etc.).
- Design the object to serve both practical and educational purposes.
- Incorporate visual elements that communicate sustainability messages.
- Ensure durability while maintaining biodegradable properties.

Option 3: Environmental Storytelling Installation

- Create a small-scale installation that tells a story about environmental change.
- Include sequential elements showing cause, effect and solution.
- Use varied textures and forms to create visual interest.
- Design for temporary display with minimal environmental impact.

Phase 4: Documentation and Presentation

Activity: Quick Documentation

Groups document their work with:

- Title and brief description
- List of materials used with percentages (biodegradable vs. recycled)
- Explanation of SDG connection
- Photograph of completed artwork

Grading Rubric (30 marks)

Criteria	Excellent (8–10)	Very Good (6–7)	Satisfactory (4–5)	Needs Improvement (1–3)
Material Selection	Demonstrates excellent use of sustainable materials (>80%) with minimal environmental impact	Effectively uses mostly (60–80%) sustainable materials with minimal environmental impact	Uses some (40–50%) sustainable materials with minimal environmental impact	Uses less than 40% sustainable materials with minimal environmental impact
SDG Connection	Compelling visual narrative addressing specific SDG targets	Clear visual communication of SDG themes but less specific SDG targets	Basic visual reference to selected SDG but less specific SDG targets	Minimal visual reference to selected SDG but no specific SDG targets
Technical Execution	Excellent craftsmanship with innovative use of sustainable materials	Very good craftsmanship with good use of sustainable materials	Little exhibition of craftsmanship with little use of sustainable materials	Little exhibition of craftsmanship with no clear use of sustainable materials

Differentiation Strategies

- Form mixed-ability groups where students can contribute according to their strengths
- Provide pre-processed materials for students with physical limitations
- Offer template designs for students needing additional structure
- Allow for different scales of artwork based on group capabilities
- Ensure materials and workspace are accessible to all students

Learning Task

Step 1: Material Identification: From the collection of materials provided, select 5-8 items that are either:

- Biodegradable (will break down naturally)
- Recyclable (can be processed and used again)
- On your cardboard base, create two simple zones using a marker line
- Sort your selected materials onto the appropriate side (biodegradable or recyclable)

Step 2: Simple Composition (7 minutes)

- Using only the materials you've sorted, arrange them on your cardboard to create a simple image or pattern that communicates ONE of these sustainability messages:
- "Reduce waste"
- "Reuse materials"
- "Protect nature"
- Secure materials using minimal tape or adhesive
- Your arrangement should be simple but meaningful

PEDAGOGICAL EXEMPLARS

- Group work/ Collaborative Learning; Project-Based Learning: In smaller groups, select some of the SDGs categories and create a corresponding art/design works that borders on the message of sustainability.
- Project-Based Learning: Individually/in smaller groups, create art/design works on the message of sustainability that relates to 21st Century futuristic ideas and product design.

KEY ASSESSMENTS

Level 4: Project-Based Task

Final Group Project:

Create an artwork that uses **at least 80% recyclable or biodegradable materials** to promote a **sustainability message** (e.g., zero waste, clean water, climate action). You may integrate digital media (e.g., AR tags, QR code links to digital gallery).

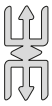
Deliverables

- A completed physical artwork
- Short documentary or digital photo diary of your process
- A presentation explaining:
  - Concept and sustainability message
  - Materials used and why
  - Group collaboration roles
  - Reflection on environmental impact and artistic decisions

PLC SESSION 11

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app

a. The key assessment for the week is ***project-based task***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the project (NTS 3k-3q).

10 minutes	Content Exploration

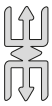
5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then

a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

Section 4 Review

Throughout this section, learners have developed understanding and skills in using art as a vehicle for environmental communication and sustainable practice. Beginning with analytical engagement, learners demonstrated perceptive abilities in interpreting embedded sustainability messages within existing artworks, examining visual metaphors, symbolism and narrative elements whilst reflecting thoughtfully on their personal and societal implications. This critical foundation informed their subsequent creative explorations, where learners conceptualised and executed innovative artworks using integrated digital and traditional approaches to communicate environmental values. Their dual-media works effectively stimulated awareness of sustainable living practices, showing impressive integration of technological skills with traditional techniques. Most significantly, students' culminating projects showcased remarkable material consciousness through

the thoughtful incorporation of biodegradable and recyclable waste materials, creating works where medium and message aligned harmoniously. Throughout these activities, learners demonstrated growing awareness of art's potential to transform environmental perspectives, not merely through representation but through embodied practice. This comprehensive engagement with sustainability in art has equipped students with valuable skills for both interpreting and creating environmentally responsible artwork, positioning them as visual communicators capable of contributing meaningfully to urgent ecological discourse through their developing artistic voices.

APPENDIX: MARKING SCHEMES FOR THE KEY ASSESSMENTS

WEEK 8

Grading Rubric (Total: 20 marks)

Criteria	Excellent (17–20)	Very Good (13–16)	Satisfactory (9–12)	Needs Improvement (1–8)
Artwork Relevance to SDG (5 marks)	Strong alignment with specific SDG with clear explanation	Clear SDG connection with some detail	Present but vague SDG connection	Weak or unclear SDG relevance
Visual Analysis & Hidden Messages (5 marks)	Insightful analysis of elements and hidden meanings	Good analysis with some interpretation	Basic analysis; limited insight	Little or no analysis
Societal & Ethical Issues (5marks)	Clearly identifies real-world ethical concerns	Issues identified with some relevance	Underdeveloped discussion	Lacks clarity on issues
Censorship/ Ethical Debate (3 marks)	Thoughtful discussion on censorship/ethical impact	Some awareness of public reaction	Mentioned but not explored	Not addressed
Group Reflection (2 marks)	Deep reflection on art's role in sustainability with examples	Good reflection with some real-life connection	General reflection	Lacks meaningful reflection

Total: $4 \times 5 = 20$ marks

WEEK 9

Grading Rubric (Total: 20 marks)

Criteria	Excellent (17–20)	Very Good (13–16)	Satisfactory (9–12)	Needs Improvement (1–8)
1. Identification of Sustainable Issues (3 marks)	Clearly identifies a specific sustainability issue (e.g., eco-fashion, clean water); strong explanation of its impact and relevance	Issue clearly identified with adequate explanation	Issue identified but explanation lacks depth	Unclear or no issue identified; vague explanation
2. Use of Materials (Recycled/Eco-Safe/Symbolic (5 marks)	Thoughtful and creative use of recycled, symbolic, or eco-safe materials; materials support the concept	Appropriate and relevant use of some recycled or eco materials	Some effort to include eco materials; use may be limited or inconsistent	Little to no use of sustainable or symbolic materials
3. Artistic Execution & Visual Impact (5 marks)	Both artworks (digital & traditional) are well-executed, visually engaging, and aligned with the sustainability theme	Artworks show clear skill and connection to the theme	Artworks completed; visual message is somewhat clear	Artworks are incomplete, poorly executed, or unclear in message
4. Application of Design Thinking (4 marks)	Creative problem-solving clearly evident in planning and production; visuals are intentional and meaningful	Design ideas are thoughtful and somewhat innovative	Design process is present but lacks originality	Little evidence of planning or thoughtful design application
5. Presentation & Communication (3 marks)	Clear, confident digital/oral/ sign language presentation; explains creative process, materials, message, and intended impact with clarity and insight	Good presentation with relevant details on process, materials, and purpose	Basic presentation; covers some aspects but lacks clarity	Weak or missing presentation; limited understanding of project shown

WEEK 10

Grading Rubric (Total: 20 marks)

Criteria	Excellent (17–20)	Very Good (13–16)	Satisfactory (9–12)	Needs Improvement (1–8)
1. Identification & Explanation of Sustainable Issues (3 marks)	Issue is clearly defined (e.g., plastic waste, renewable energy), relevant to Ghana/ global context, and thoroughly explained with specific examples or data	Issue is well defined with a clear explanation and some examples or context	Issue is identified but explanation is general or lacks depth	Issue is vague or not explained; lacks relevance to sustainability
2. Use of Materials (Recycled/Eco-Safe/Symbolic (5 marks)	Artworks creatively and meaningfully use recycled or eco-safe materials (e.g., bottle caps, clay, jute), clearly linked to the message/ theme	Appropriate and consistent use of sustainable or symbolic materials	Some use of sustainable materials, but limited creativity or symbolic connection	Little or no effort to use sustainable materials; unrelated to theme
3. Artistic Execution & Visual Impact (5 marks)	Strong evidence of planning, ideation, and experimentation; visuals are powerful, innovative, and reflect deep thinking	Clear use of design process; visuals support concept effectively	Some planning evident; visuals show effort but lack depth or originality	Little or no planning; visuals are weak, rushed, or unclear
4. Application of Design Thinking (4 marks)	Both artworks (digital and traditional) are highly detailed, finished, neat, and technically strong; clear link to the theme	Artworks are complete, visually appealing, and technically sound	Artworks are complete but may lack finish, detail, or control	Artworks are incomplete, messy, or poorly executed
5. Presentation & Communication (3 marks)	Presentation (oral/digital/ sign language) is well-structured, confident, and clearly explains the creative process, material choices, message, and expected community impact	Presentation is clear and covers all required points with moderate insight	Presentation is brief or lacks clarity in one or two areas	Presentation is confusing, incomplete, or missing key explanations

WEEK 11

Grading Rubric (Total: 20 Marks)

Criteria	Excellent (17–20)	Very Good (13–16)	Satisfactory (9–12)	Needs Improvement (1–8)
1. Use of Recyclable/ Biodegradable Materials (4 marks)	At least 80% of materials are recycled/ biodegradable. Materials are creatively sourced, used purposefully, and reflect environmental consciousness.	Between 70–79% sustainable materials. Mostly relevant and used with intention.	Below 70% sustainable use. Limited relevance to concept or inconsistent material use.	Little evidence of sustainable material use. Random or unrelated to the message.
2. Visual Impact & Artistic Execution (4 marks)	Artwork is aesthetically strong, well-crafted, and clearly communicates the sustainability theme. Excellent technique and finish.	Artwork is neat and communicates the theme with moderate impact. Good effort in layout and design.	Artwork is complete but lacks strong artistic cohesion or finish. Message is partially clear.	Artwork is unfinished or poorly crafted. Visuals are unclear and confusing.
3. Process Documentation (Photo Diary or Video) (4 marks)	Documentation includes clear visuals with captions, showing concept, material sourcing, steps, and final product. Process is creative and informative.	Good quality visuals with captions or narration. Most steps are shown in logical sequence.	Some steps shown. Basic visuals, captions may be missing or unclear.	Little to no documentation provided or not coherent.
4. Concept & Presentation Explanation (6 marks – Enhanced)	Clear, well-structured presentation (oral, digital or sign language) addressing: Theme and its relevance to a specific sustainability issue (e.g., water pollution, e-waste)	Message is present but not deeply analysed. Some parts are unclear or missing (e.g., reflection or impact).	Artistic decisions and how each material reinforces the message	Weak or incomplete explanation. Lacks detail, relevance, or logical flow. No reflection or connection to sustainability.
Integration of Digital Media & Innovation (2 marks)	Effective use of digital tools (e.g., QR codes, AR, digital galleries) that enhance accessibility and awareness of the sustainability message.	Digital component is present and relevant but not highly engaging or creative.	Digital component is minimal or weakly integrated.	No digital component or irrelevant use.

SECTION 5: MEDIA PROCESSES AND TECHNIQUES

STRAND: CREATIVE METHODOLOGIES

Sub-Strand: Fabrication and Construction

Learning Outcome: *Use multiple methods, such as analogue and digital media processes and techniques, and materials in the environment to create 2-Dimensional artwork in response to societal problems.*

Content Standard: Demonstrate knowledge and skill in using analogue and digital media processes and techniques, together with any other relevant skills and materials and in the environment to create 2-Dimensional solutions for societal problems.

INTRODUCTION AND SECTION SUMMARY

This section deepens the development of skills in 2D and 3D art creation with emphasis on interdisciplinary problem-solving, technical proficiency, and social relevance. The section's indicators progress from analysis to creation across multiple media formats. For 2D art, learners analyse and categorise various media processes, techniques, tools, and methods for both analogue and digital approaches. They then apply this knowledge by creating 2D artworks that integrate multiple methods to address societal problems. In the 3D domain, learners research objects from diverse disciplines to understand form and fabrication methods. They explore additive, subtractive, and alternative processes for creating mixed-media artwork. This culminates in designing and creating 3D mixed-media artworks that respond to discipline-specific challenges. Key themes across these indicators include the integration of traditional and digital approaches, a problem-solving orientation, technical versatility, interdisciplinary connections, and progressive skill development. The section develops learners to be technically proficient and socially conscious, capable of applying their skills across disciplines to address real-world challenges through artistic expression and design aptitudes in 2D and 3D forms.

The weeks and the indicators covered by the section are:

Week 12: Analyse multiple media processes and techniques used in creating 2-Dimensional art works in the environment.

Week 13: Categorise tools, materials and methods for analogue and digital media in the environment, and their potential usage.

Week 14: Create 2-Dimensional artwork using multiple methods, including analogue and digital media processes and techniques in response to societal problems.

Week 15: Create 2-Dimensional artwork using multiple methods, including analogue and digital media processes and techniques in response to societal problems.

Week 16: Identify objects from various disciplines of study such as education, engineering, health, architecture, agriculture, etc to record their form and methods of fabrication.

Week 17: Discuss materials and methods of fabrication in relation to additive and subtractive processes and techniques, together with any other applicable methods for creating 3-Dimensional mix-media artwork.

Week 18: Design and create 3-dimensional mixed media artworks using materials, appropriate tools and processes in response to challenges within selected disciplines of study such as education, engineering, health, architecture, agriculture, etc.

Recap indicators for the section

Year 1:	Week 13: Examine the workability of conventional and non-conventional tools and materials from the environment that can be used to create 2-D art or design works. Week 16: Design and create 2-D artwork using conventional and non-conventional materials, tools, and relevant processes to respond to societal problems.
Year 2:	Week 12: Create multiple proposals with accompanying notes in 2D, 3D, or mixed-media presentations for possible art and design studio task. Week 13: Identify materials and the appropriate tools for the subtractive processes of creating 3-D artforms.

SUMMARY OF PEDAGOGICAL EXEMPLARS

This section employs diverse pedagogical exemplars that provide a structured approach to teaching art and design through collaborative, problem-based, and project-based learning strategies. The exemplars progress systematically from discussion and analysis to creation and application across both 2-dimensional (2D) and 3-dimensional (3D) art forms. For 2D art exploration, activities begin with personal experience sharing and group discussions using realia, photos, and videos to analyse multiple media processes. Students then collaborate to create manual/digital scrapbooks and analyse tools, materials, and methods for both digital and analogue artworks. The learning deepens as learners categorise these elements according to potential usage and identify community problems that can be addressed through art, resulting in creating artworks that respond to community challenges. In the 3-dimensional works, learners work collaboratively to identify and document objects from various disciplines, analysing their forms and fabrication methods. They examine additive and subtractive processes through class discussions, photos, videos, and realia, and categorise these methods in digital tables. The sequence concludes with learners investigating discipline-specific challenges and creating 3D mixed-media artworks using scavenged materials to address these issues. In

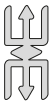
these exemplars, emphasis is placed on collaboration, critical thinking, gender sensitivity, and respect for diverse perspectives and skill sets.

SUMMARY OF ASSESSMENT STRATEGIES

This section employs a progressive assessment strategy evaluating students' analytical understanding and creative application of media techniques across both 2D and 3D formats.

For media analysis and categorisation (Weeks 12-13), assessment employs comparative analysis charts and classification tasks evaluating students' ability to identify techniques (DoK Level 1), understand their conceptual applications (DoK Level 2), and strategically analyse their environmental relevance (DoK Level 3). The 2D creation components (Weeks 14-15) employ process documentation and final artwork assessment. Process documentation evaluates research, concept development and technical experimentation, while final artwork assessment examines technical execution, conceptual clarity and effectiveness in addressing societal problems (DoK Level 4).

For 3D components, object identification and fabrication method discussions (Weeks 16-17) are assessed through visual documentation portfolios and analytical reports evaluating observational accuracy and technical understanding. The culminating 3D mixed-media creation (Week 18) is assessed through comprehensive rubrics examining material selection, technical execution and conceptual resolution. Throughout all weeks, assessment incorporates both technical skill evaluation and conceptual development assessment. Particular attention is given to evaluating students' ability to select appropriate techniques for specific conceptual challenges, ensuring thorough measurement of both technical proficiency and critical problem-solving capabilities across diverse media applications.



Note

Generally, key assessment modes in this section cover tasks based on scenario, research and documentation, concept development and media exploration, project-based, research and fabrication investigation, research and project execution. Regular implementation of diverse assessment methods is crucial to evaluate leaners' comprehension and performance of the concepts in this section. Teachers should consistently conduct these evaluations to effectively monitor learning progress. It is recommended that teachers administer the suggested assessments weekly, maintain accurate records, and upload results to the Student Assessment Portal (SAP) for proper documentation.

Learning Indicators	DOK Level	Assessment Mode
Analyse multiple media processes and techniques used in creating 2-Dimensional art works in the environment.	4	Practice Paper 1
Categorise tools, materials and methods for analogue and digital media in the environment, and their potential usage.	3	Research and Documentation
Create 2-Dimensional artwork using multiple methods, including analogue and digital media processes and techniques in response to societal problems.	3	Multiple-Choice - Concept Development and Media Exploration
Create 2-Dimensional artwork using multiple methods, including analogue and digital media processes and techniques in response to societal problems.	3	Project-Based
Identify objects from various disciplines of study such as education, engineering, health, architecture, agriculture, etc to record their form and methods of fabrication.	4	Research and Fabrication Investigation
Discuss materials and methods of fabrication in relation to additive and subtractive processes and techniques, together with any other applicable methods for creating 3-Dimensional mix-media artwork.	4	Research and Project Execution
Design and create 3-dimensional mixed media artworks using materials, appropriate tools and processes in response to challenges within selected disciplines of study such as education, engineering, health, architecture, agriculture, etc.	4	Practice Paper 2

WEEK 12

Learning Indicator: *Analyse multiple media processes and techniques used in creating 2-Dimensional artworks in the environment*

FOCAL AREA: MULTIPLE MEDIA PROCESSES AND TECHNIQUES USED IN CREATING 2-DIMENSIONAL ARTWORKS

MULTIPLE MEDIA PROCESSES AND TECHNIQUES IN 2-DIMENSIONAL ARTWORKS

Media processes and techniques in art and design were discussed in Year 1 and Year 2 Teacher Manuals. This section recaps what was learned and further exposes the learner to diverse media processes and techniques in creating 2-Dimensional artworks to address societal problems.

Two-Dimensional artworks exist on flat surfaces and include forms such as drawing, painting, printmaking, photography, and digital art. Artists often combine multiple media and techniques to express ideas more dynamically, explore different textures, or address complex themes.

1. **Drawing Techniques**

   Drawing is foundational in 2-D art and can be both an independent form and a basis for other media.

   - Pencil (Graphite): For fine detail, shading, and tonal work.
   - Charcoal: For expressive, dramatic marks and contrasts.
   - Ink: Used for bold lines or delicate washes with brush or pen.
   - Conté/Chalk Pastels: For soft blending and layering of colours.

   Process Tip: The learner may layer pencil under ink to build structure and depth.

2. **Painting Techniques**

   Painting involves applying pigment to a surface (canvas, paper, wood).

   - Acrylic Painting: Fast-drying, water-based, and versatile.
   - Oil Painting: Rich colours, slow drying—ideal for blending and detail.
   - Watercolour: Transparent layers, good for fluid, atmospheric effects.
   - Gouache: Opaque watercolour, vibrant and flat colour areas.

   Technique Variations

   - Impasto: Thick application of paint for texture.

- Glazing: Thin layers of transparent paint to build luminosity.
- Dry Brush: Scratching paint lightly for texture.

3. Printmaking Techniques

Printmaking allows artists to create multiple originals with consistent quality.

- Relief Printing (Linocut/Woodcut): Carving into a block, inking the raised surface.
- Intaglio (Etching/Drypoint): Incising into a surface and printing the recessed lines.
- Screen Printing (Silkscreen): Using stencils and mesh to apply ink in layers.
- Monoprinting: One-off prints created using unique inking or transfer methods.

Hybrid Use: Printmaking can be combined with drawing or collage for mixed-media results.

4. Collage and Mixed Media

This involves combining different materials or media on one surface.

- Collage: Assembling paper, fabric, photographs, and found objects.
- Assemblage (2-D): Using shallow 3D elements like buttons or string.
- Photomontage: Combining multiple photographic elements to create a single image.

Uses: Often applied in political or conceptual art to layer meaning and texture.

5. Photography (Analogue and Digital)

- Film Photography: Darkroom processes for artistic effects (grain, contrast).
- Digital Photography: Edited and manipulated using software (Photoshop, Lightroom).
- Experimental Techniques: Double exposure, solarization, or collage with photos.
- Applications: Powerful in social commentary, documentation, or narrative-based art.

6. Digital Art Techniques

- Digital Illustration: Using tools like Procreate or Photoshop to “paint” or draw.
- Vector Art: Clean, scalable images made in software like Adobe Illustrator.
- Digital Collage: Blending photography, text, and illustration into a single artwork.
- Photo Manipulation: Altering or combining photos for surreal or conceptual effects.

Advantages: Undo functions, layering, and instant editing make it highly versatile.

7. Typography and Graphic Design

- Hand-Lettering: Artistic, custom text often integrated into illustrations.
- Digital Typography: Using fonts and layout tools for posters, zines, or digital campaigns.
- Stencil Work: In analogue or digital forms, for impactful text in protest art or street art.
- Common in: Awareness posters, magazine layouts, or advocacy designs.

8. Surface Treatment Techniques

Even in 2-D, artists manipulate the surface for visual or tactile effect:

- Sgraffito: Scratching through a surface layer to reveal what's underneath.
- Collagraphy: Building up textures on a plate before printing.
- Texture Rubbings: Using materials underneath paper to create surface interest.

In contemporary practice, artists rarely confine themselves to one medium. Instead, they combine multiple media processes and techniques to:

- explore new aesthetics,
- engage viewers on multiple sensory levels, and
- communicate complex messages—especially when addressing societal, political, or cultural issues.

Learning Tasks

Mini-Project for week 12: Multi-Media Art for Social Change

Title: "Dual Perspectives: Addressing Emerging Social Challenges Through Analogue and Digital Media"

Duration: 3 hours (*can be extended)*

Project Brief/Theme: "Digital Addiction and Mental Wellbeing"

This project requires learners to create 2D artwork that addresses the emerging social challenge of digital addiction and its impact on mental health by analysing existing artworks addressing this theme and creating their own work that combines both analogue and digital media processes to communicate a message about digital wellness.

Suggested Materials

Analogue Materials

- Drawing materials (pencils, charcoal, ink)
- Painting supplies (watercolours, acrylics, dyes)

- Collage materials (magazines, newspapers)
- Printmaking supplies (simple block printing)
- Textured papers and cardstock
- Natural materials for mark-making

Digital Tools

- Digital cameras or smartphones
- Computers with basic image editing software
- Tablets with drawing apps (if available)
- Printers for digital-to-analogue transfer
- Scanning capability (if available)

Project Structure

Phase 1: Analysis and Exploration
Activity 1: Artwork Analysis

- Present examples of 2D artworks addressing digital addiction and mental health
- In mixed-ability groups, analyse these artworks using guided questions:
  - How do the artworks combine analogue and digital techniques?
  - What social message is being communicated?
- How do different media choices enhance the message?
- Groups share their analyses with the class

Activity 2: Social Challenge Discussion

- Discuss the emerging challenge of digital addiction and mental well-being
- Explore different aspects:
- Social media dependency
- Online-offline balance
- Digital communication vs. face-to-face interaction
- Screen time and mental health
- Digital wellness strategies
- Learners to identify specific aspects they wish to address in their artwork

Phase 2: Media Experimentation

Activity: Technique Exploration

Learners rotate through stations exploring different combinations of analogue and digital processes:

Station 1: Digital-to-Analogue Transfer

- Taking digital images and incorporating them into hand-drawn work
- Printing digital elements for collage or mixed media

Station 2: Analogue-to-Digital Enhancement

- Creating hand-drawn elements and scanning/photographing them
- Digital modification of traditional artwork

Station 3: Hybrid Techniques

- Creating textures and patterns using both analogue and digital methods
- Layering digital and physical elements

Station 4: Message Development

- Sketching ideas that communicate about digital addiction
- Planning visual metaphors and symbols

Phase 3: Artwork Creation

Activity: Multi-Media Artwork Development

Learners create a 2D artwork addressing digital addiction and mental wellbeing using a combination of analogue and digital processes.

Requirements

1. The artwork must incorporate both analogue and digital media processes.
2. The artwork must clearly communicate a message about digital addiction and mental well-being.
3. The artwork must demonstrate thoughtful media choices that enhance the message.
4. Learners must document their process, showing the integration of different media.

Suggested Approaches

1. Create a traditional drawing/painting that incorporates printed digital elements.
2. Develop a digital collage using scanned hand-created textures and drawings.

3. Create a series of images showing progression from analogue to digital (or vice versa).
4. Design a mixed media piece with a QR code linking to additional digital content.

Phase 4: Documentation and Reflection (30 minutes)

Activity: Process Documentation

Students document their creative process and final artwork:

1. **Media Process Documentation**
   - Photographs showing stages of development
   - Notes on techniques used and challenges faced
   - Explanation of how analogue and digital processes were integrated
2. **Social Message Statement**
   - Description of the specific aspect of digital addiction addressed
   - Explanation of visual symbols and metaphors used
   - Intended impact on viewers

Assessment Criteria

Criteria	Excellent (8-10)	Very good (5-7)	Satisfactory (3-4)	Needs Improvement (0–2)
Media Integration (10)	4 examples: Social media collage; Digital-watercolour hybrid; Photo-digital overlay; Interactive physical-digital artwork	3 examples: Social media collage; Digital-watercolour hybrid; Photo-digital overlay	2 examples: Social media collage; Digital-watercolour hybrid	1 example: Social media collage; Digital-watercolour hybrid
Technical Execution (10)	4 examples: Mixed media with screenshots; Contrasting colour digital painting; Photos with data overlays; Interactive installation	3 examples: Mixed media with screenshots; Contrasting colour digital painting; Photos with data overlays	2 examples: Mixed media with screenshots; Contrasting colour digital painting	1 example: Mixed media with screenshots; minimal Contrasting colour digital painting
Social Message (10)	4 examples: Social media emotion collage; Nature-notification contrast; Screen time impact prints; Interactive reflection piece	3 examples from excellent category	2 examples from excellent category	1 example from excellent category

Criteria	Excellent (8–10)	Very good (5–7)	Satisfactory (3–4)	Needs Improvement (0–2)
Process Documentation (10)	4 examples: Social media emotion artwork; Natural–digital landscape; Statistical mixed–media poster; Digital art with physical textures	3 examples from excellent category	2 examples from excellent category	1 example from excellent category

Differentiation Strategies

- Offer various entry points for digital creation based on technology access.
- Provide templates or starting points for students needing additional structure.
- Allow flexibility in the balance between analogue and digital components.
- Ensure materials and digital tools accommodate diverse abilities.
- Create buddy systems pairing students with different strengths.

PEDAGOGICAL EXEMPLARS

Talk for Learning: In a class interaction, share personal experiences in the use of multiple media processes and techniques for creating 2-Dimensional artworks.

Group work/ Collaborative Learning : In small groups/ whole-class interaction, use realia, photos and videos to discuss how multiple media processes and techniques have been used to create 2-D art and design works.

Project-Based Learning: In mixed-ability groups generate a manual/digital scrapbook of 2-D artworks created using multiple media processes and techniques.

KEY ASSESSMENT

Practice Paper 1

Final Group Project

Create a 2D artwork using two or more media techniques (e.g., drawing, collage, painting digital overlay) that conveys a strong message on sustainability, such as waste management, climate action, water conservation, or renewable energy that will impact society. A presentation on the work should also be prepared.

Each group should:

Select a theme on sustainability and:

- Combine two or more media techniques that promote sustainability
- Prepare a presentation explaining:
  - **i.** Media choices and creative process
  - **ii.** Sustainability relevance
  - **iii.** Techniques used
  - **iv.** The message and intended impact



Hint

*Conduct **Practice Paper 1**. It should cover the contents taught from Year 1 to 3. Refer to the **Table of Specification and Structure of the Paper** at the end of this section. Learners' papers should be marked immediately and scores entered into the STP.*

STRUCTURE OF THE PAPER

The Arts and Design Studio would comprise of three papers. Below is a detailed description of each paper:

(I) PAPER 1 (OBJECTIVE TEST)

It comprises **forty Multiple-choice questions** to be answered within **50 minutes** for **40 marks.**

(II) PAPER 2 (ESSAY TEST)

This will comprise **eight questions** and candidates would be expected to answer 4 questions, within **120 minutes for 60 marks.** The paper will be in **three sections** - that is **A, B and C**. **A** comprises Art and Design Theories and applications, B comprises Creative Methodologies and C is creative projects. The candidates would be expected to answer **one (1) question out of 2** from **Section A**, **two (2) questions** out of 3 from **Section B** and **two (2) questions** out of 3 from **Section C.**

(III) PAPER 3: PRACTICAL/ PROJECT WORK

The table below describes the structure of the project work:

Requirement	Assessment
Paper 3: 2-D and 3-D Visual Responses	
Compulsory	**2-Dimensional Visual Response - 15 hours** Paper to be given two weeks before the commencement of the WAEC Examination. **Three project briefs** (questions) will be issued. Candidates will be required to submit TWO responses to one of the three project briefs (questions), with one response being in 2-dimensional form and the other in 3-Dimensional form Candidates are to include explorations of all preliminary studies (artists/ artworks/cultural relics/pop culture) relevant to the chosen theme/media in their examination portfolio.

Requirement	Assessment
	The examination portfolio will comprise of: the 2-D finished artwork, a sketchbook (A3) containing no more than SIX sheets of preparatory sketches and referenced materials album (sources of inspiration) containing no more than FOUR sheets.
	3-D Visual Response - 15 hours Candidates are to include explorations of all preliminary studies (artists/ artworks/cultural relics/pop culture) relevant to the chosen theme/media in their examination portfolio. The examination portfolio will comprise of: the 3-D finished artwork or prototype model a sketchbook (A3) containing no more than SIX sheets of preparatory sketches and referenced materials album (sources of inspiration) containing no more than FOUR sheets.

There is a Project Brief (question paper) for this component.

Candidates choose two starting points to develop into a personal response.

There are two parts to the project:

- Supporting studies, created during the preparation period and
- A final outcome (finished work), produced during a supervised test of 15 hours' total duration.

Candidates are required to provide evidence of their ability to:

- document ideas and observations from direct investigations, including their own drawings and photos, as well as secondary imagery and sources.
- engage in the exploration and experimentation of various media, techniques, and processes.
- conduct thorough research on artists, designers, and cultural influences to inform the development of ideas.
- carefully select, review, and refine their work throughout the entire process to strategically plan and produce a personal and cohesive outcome.

APPENDIX: ART AND DESIGN STUDIO – ITEM SPECIFICATION TABLE (YEAR 1, SEMESTER 1)

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
1	Document the components of Art and Design Studio: Sculpture, Painting, Graphic Design, Textiles, Ceramics, Jewellery, Leatherwork, Pliable Arts (Basketry, Fibres and Fabrics, etc.), Contemporary Art	**Multiple choice**					
2	Document the roles of the various components of the Art and Design Studio	**Multiple choice**	1				
3	Discuss art materials according to nature, technique and purpose	**Multiple choice**		1			
		Essay			1		
4	Discuss the basic methods and techniques in creating 2-Dimensional and 3-Dimensional art and design works.	**Multiple choice**		1			
5	Discuss the basic methods for preparing and storing art media	**Multiple choice**		1			
6	Explain the concept of professional practice in Art	**Multiple choice**					
		Essay		1			
7	Analyse the concept of ethics in Art and Design	**Multiple choice**			1		
8	Identify how art or design studio tasks can be used as an artistic intervention for social problems.	**Multiple choice**	1				
		Essay					
		Practical					
9	Determine possible multiple forms of artworks in Art and Design that can be used to solve identified problems in society	**Multiple choice**		1			
		Essay					
		Practical					
10	Create multiple proposals with accompanying notes in 2-D, 3-D, or mixed-media presentations for possible art and design studio tasks.	**Multiple choice**					
		Essay					
		Practical					

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
11	Examine the workability of conventional and non-conventional tools and materials from the environment that can be used to create 2-D art or design works.	**Multiple choice**		1			
		Essay		1			
12	Design and create 2-D art or design work using conventional and non-conventional materials, tools, and relevant processes to respond to societal problems.	Multiple choice					
		Essay					
		Practical					

ART AND DESIGN STUDIO - ITEM SPECIFICATION TABLE (YEAR 1, SEMESTER 2)

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
13	Identify materials, tools, and relevant processes and techniques used in performing 3D studio tasks	**Multiple choice**	1				
14	Design and create 3D artworks using conventional and non-conventional materials, tools, and relevant processes in response to societal problems	**Multiple choice**					
15	Use a visual medium to create art and design projects with an emphasis on protective and decorative processes.	**Multiple choice**		1			
		Essay				1	
16	Apply safety measures in creating art and design work with special attention to protective and decorative processes to create artwork.	**Multiple choice**					
17	Develop artist statements to reflect portfolio and exhibition.	**Practical**				1	
18	Generate a manual and digital portfolio as evidence of art and design practice.	**Multiple choice**					

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
19	Use appropriate strategies to mount an art and design exhibition.	**Multiple choice**		**1**			
20		**Multiple choice**					
		Essay					
		Practical					
21		**Multiple choice**					
		Essay					
		Practical					
22		**Multiple choice**					
		Essay					
		Practical					
23		**Multiple choice**					
		Essay					
24		**Multiple choice**					
		Essay					
		Multiple Choice					

ART AND DESIGN STUDIO - ITEM SPECIFICATION TABLE (YEAR 2, SEMESTER 1)

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
1	Examine etiquettes to be observed in Art and Design studio practices and their implication in teaching and learning the subject	**Multiple choice**					
2	Develop an understanding of etiquette associated with Art and Design Studio practices.	**Multiple choice**		**1**			
3	Discuss and apply analogue and digital media in built environments and describe how they are used as basic media for the creation of art and design	**Multiple choice**	**1**				

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
4	Analyse how selected analogue and digital media in nature and the built environment contribute to solving societal problems through the artworks	**Multiple choice**		1			
5	Analyse the concept of professional ethics in design	**Multiple choice**					
6	Analyse the codes and regulations of art and design practices in Ghana	**Multiple choice**			1		
7	Analyse antique artworks made in single materials and propose new ways of making such works as mixed media representations.	**Multiple choice**					
8	Analyse multiple approaches, material combinations, and techniques for the work, as well as the appropriate mode of presentations.	**Multiple choice**		1			
		Essay					
		Practical					
9	Create multiple annotated mixed media presentations in preferred artistic formats as studio thinking for creating artworks.	**Multiple choice**		1			
		Essay					
		Practical				1	
10	Identify and document image-making, and repetition processes and techniques used to create selected 2-Dimensional art or design works.	**Multiple choice**	1		1		
		Essay					
		Practical					
11	Analyse how image-making and repeat processes and techniques for creating 2-dimensional artworks can be undertaken with relevant tools and materials	**Multiple choice**			1		
		Essay					

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
12	Create 2-dimensional art or design works with tools and materials with image making and repeat processes and techniques.	Multiple choice					
		Essay					
		Multiple Choice					

ART AND DESIGN STUDIO - ITEM SPECIFICATION TABLE (YEAR 2, SEMESTER 2)

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
13	Identify materials and the appropriate tools that can be used in the subtractive processes of creating 3-dimensional art forms	**Multiple choice**					
14	Review different types of subtractive processes and techniques for performing particular studio tasks and creation of artworks	**Multiple choice**	1				
		Essay		1			
15	Design and Create 3-dimensional artwork with local materials and appropriate tools using subtractive processes and techniques to solve a societal problem	**Multiple choice**					
16	Distinguish and record the difference between protective processes and decorative processes in artefact productions.	**Multiple choice**		1			
17	Apply knowledge and skills in safety, maintenance and sustainability in environmental protection and energy conservation (Greening Education).	**Practical**					

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
18	Apply designing and finishing processes to create an artistic project to solve a social problem	**Multiple choice**				1	
19	Distinguish between portfolio building and exhibition.	**Multiple choice**		1			
20	Mount hardcopy/ digital as well as online exhibition of own works and that of others	**Multiple choice**					
		Essay					
		Practical					
21	Generate artist statements and exhibition brochures on own works and that of others	**Multiple choice**					
		Essay					
		Practical					
22		**Multiple choice**					
		Essay					
		Practical					
23		**Multiple choice**					
		Essay					
24		**Multiple choice**					
		Essay					
		Multiple Choice					

ITEM SPECIFICATION TABLE (YEAR 3, SEMESTER 1)

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
1	Learners acquaint themselves with the Copyright Act of Ghana, 2005 (Act 690) Patent Act, 2003 (Act 657) Trademarks Act, 2004(Act 664), Company Act, 2019(Act 992) and their implications for art and design studio practices.	**Multiple choice**	1				
2	Investigate the art business registration, its importance and implication for art studio practice	**Multiple choice**		1			
3	Investigate how art laws and policies inform societal development.	**Multiple choice**			1		
4	Research into recipes for making art media from natural and man-made sources.	**Multiple choice**	1				
5	Use computer software applications to simulate the effects of art media	**Practical**					
6	Examine ethical considerations to be observed in art studio practice	**Multiple choice**			1		
7	Discuss the essence of censoring artworks to meet societal ethics.	**Multiple choice**					
8	Discuss embedded sustainable development messages within selected artworks through the analysis of the actual meaning of the image, and reflection and reaction.	**Multiple choice**		1			
		Essay				1	
		Practical					

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
9	Create innovative and inventive artworks and designs centred on sustainable development using both digital and other media ideations that can stimulate students' consciousness on the relevance of sustainable living	**Multiple choice**		1			
		Essay					
		Practical					
10	Design and create artwork based on the message of sustainability using biodegradable and 80% recyclable waste materials	**Multiple choice**				1	
		Essay					
		Practical					
11	Analyse multiple media processes and techniques used in creating 2-dimensional artworks in the environment	**Multiple choice**		1			
		Essay					
12	Categorise tools, materials and methods for analogue and digital media in the environment, and their potential usage.	Multiple choice					
		Essay					
		Multiple Choice					

ITEM SPECIFICATION TABLE (YEAR 3, SEMESTER 2)

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
13	Create 2-dimensional artwork using multiple methods, including analogue and digital media processes and techniques in response to societal problems.	**Multiple choice**				**1**	
		Practical				**1**	
14	Identify objects from various disciplines of study such as education, engineering, health, etc to record 3-dimensional representation and fabrication methods.	**Multiple choice**					
15	Discuss materials and fabrication methods about additive and subtractive processes and techniques, together with any other applicable methods for creating 3-dimensional mixed media artworks.	**Multiple choice**				**1**	
		Essay		**1**			
16	Design and create 3-dimensional mixed media artworks using materials, appropriate tools and processes in response to challenges within selected disciplines of study such as education, engineering, health, architecture, agriculture, etc.	**Multiple choice**				**1**	
17	Make a short video presentation to illustrate the characteristics of advanced finishing techniques.	**Multiple choice**					
18	Mount hardcopy/ digital as well as online exhibition that reflects selected advanced finishing techniques.	**Multiple choice**	**1**				

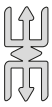
Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
19	Present a short report on the exhibition mounted in relation to advanced finishing techniques.	**Multiple choice**					
20	Identify and analyse the challenges involved in organising digital portfolios.	**Multiple choice**		1			
		Essay				1	
		Practical					
21	Discuss the benefits of a digital portfolio.	**Multiple choice**			1		
		Essay					
		Practical					
22	Identify some contemporary Ghanaian artists who depend largely on portfolio building in their artistic practice.	**Multiple choice**	1				
		Essay					
		Practical					
23		**Multiple choice**					
		Essay					
24		**Multiple choice**					
		Essay					
		Multiple Choice					
	Total		10	22	8	11	51

MCQs	40
Essay	8
Practical	3
Total	51

PLC SESSION 12

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous session, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand.
   b. identify three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q).
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Use your app to plan and administer the mode of assessment for the Student Assessment Portal (SAP)
   a. The key assessment for the week is ***practice paper 1***. Chat with your app to plan this assessment by reviewing or developing the assessment items/tasks and marking schemes/rubrics for the practice paper (NTS 3k-3q).

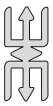
10 minutes	Content Exploration

5. As a subject group, select one problem or topic/idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then
   a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through the problem individually for 3–4 minutes

c. the group then works through it together the problem, step by step

d. highlight the most common errors made at each step (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 13

Learning Indicator: *Categorise tools, materials and methods for analogue and digital media in the environment, and their potential usage*

FOCAL AREA: CATEGORISING AVAILABLE ANALOGUE AND DIGITAL MEDIA IN THE ENVIRONMENT AND THEIR POTENTIAL USAGE

1. *How Analogue and Digital media reflects societal problems*
2. *Analogue and Digital media in the creation of 2-D artworks that address societal problems*

ANALOGUE MEDIA

Analogue media may refer to any form of information carrier where the data is represented by a continuous, varying signal, as opposed to discrete digital data. This means the information is recorded and reproduced by physical variations (like grooves in a vinyl record, or magnetic changes on tape) rather than digital codes.

However, in this manual, **analogue media** is used to refer to traditional, physical art-making tools and methods. Thus, it refers to traditional, physical art-making tools and techniques that do not rely on digital technology. These are the foundational methods artists have used for centuries before the digital revolution. This includes but not limited to:

- **Drawing:** Pencil, charcoal, ink
- **Painting:** Acrylic, oil, watercolour
- **Printmaking:** Linocut, woodcut, screen printing
- **Collage and Mixed Media:** Using cut-outs, found objects, and natural materials

Explanation in Addressing Societal Problems

Tactility and Authenticity: Analogue artworks often convey a raw, emotional quality that feels personal and immediate. For instance, a charcoal drawing of a homeless figure might evoke empathy through expressive mark-making.

Historical Weight: Traditional media can connect contemporary issues to art history, grounding modern concerns in established visual languages (e.g., protest posters in printmaking).

Community Engagement: Murals or street art (often analogue) in public spaces can raise awareness directly within communities, giving voice to underrepresented groups.

Digital Media

Digital media involves the use of computers and digital tools to create artworks. This includes but not limited to:

- **Digital Painting and Drawing**: Software like Adobe Photoshop, Procreate
- **Photomanipulation**: Editing and composing photos to create new meanings
- **Graphic Design**: Posters, infographics, typography
- **Video and Animation**: Short films, motion graphics (in 2-D form)

Explanation in Addressing Societal Problems

Accessibility and Reach: Digital artworks can be shared instantly across the internet, making them ideal for global activism and raising awareness (e.g., social media campaigns).

Versatility and Experimentation: Artists can layer images, use symbolic graphics, and incorporate text to make complex issues more visually engaging and understandable.

Collaboration and Interactivity: Digital tools enable collective projects, such as collaborative zines or interactive infographics, that engage viewers in dialogue.

Comparative Example: *Climate Change*:

Analogue: A hand-painted poster showing melting glaciers might offer an emotional, human touch, suitable for gallery or protest settings.

Digital: A stylized infographic shared online can quickly communicate facts and urgency to a broad audience, especially younger viewers.

In sum, both analogue and digital media serve powerful roles in creating 2-D artworks that address societal problems. Analogue offers emotional depth, texture, and tradition; digital brings speed, innovation, and wide accessibility. Many contemporary artists blend the two, using hybrid approaches to harness the strengths of each and to make their social messages more impactful.

I. Analogue Media (Traditional Media)

Tools

Tool	Potential Usage
Pencils (HB to 8B)	Sketching, shading, detailed line work
Paintbrushes (varied sizes)	Applying watercolour, acrylic, or ink
Palette knives	Creating texture with thick paint (impasto)
Rulers, stencils	Geometric accuracy, repeated patterns
Scissors/X-Acto knives	Cutting for collage or mixed media
Charcoal sticks	Expressive, bold shading and gesture drawing

Materials

Material	Potential Usage
Paper (recycled, watercolour, newsprint)	Drawing, painting, printing
Cardboard	Base for mixed-media or recycled art
Fabric scraps	Texture and layering in collage
Found materials (leaves, plastic, wrappers)	Environmental commentary in art
Glue, adhesives	Assembly of mixed-media works

Methods

Method	Potential Usage
Collage	Combining varied materials to convey meaning
Printmaking (linocut, monoprint)	Creating repeated or textured imagery
Watercolour layering	Light, transparent effects, mood creation
Mixed-media layering	Depth and narrative through visual texture
Assemblage	Constructing 2D compositions from found objects

II. Digital Media

Tools

Tool	Potential Usage
Graphics tablet & stylus	Precision digital drawing and painting
Computer & software	Design, illustration, photo manipulation
Smartphone with art apps	Mobile digital art creation
Digital camera or scanner	Importing analogue work or environmental textures
Printer	Producing physical copies of digital art

Materials (Digital Equivalents)

Material	Potential Usage
Digital brushes & textures	Simulating traditional media (ink, watercolour, etc.)
Digital stock images/photos	Backgrounds, collages, textures
Scanned natural textures (leaves, fabric)	Layering or texturing in digital artworks
Vector shapes	Clean, scalable elements for design
Colour palettes (HEX/RGB)	Harmonized visual themes

Methods

Method	Potential Usage
Layering (Photoshop, Procreate)	Organizing artwork into editable sections
Photo manipulation	Social commentary through digital collage
Vector illustration	Creating clean, precise, scalable artwork
Digital collage	Combining scanned and digital elements for rich narratives
Animation or motion graphics (optional 2D extension)	Bringing environmental themes to life digitally

III. Environmental Integration in Analogue and Digital Art

Category	How It Integrates with the Environment
Found Materials (Analogue)	Use of recycled items (plastic, paper, fabric) to raise awareness about sustainability
Natural Materials (Analogue)	Use of sand, leaves, sticks, or soil for texture and symbolism
Scanned Environmental Textures (Digital)	Incorporating textures like bark, rust, or earth digitally
Photo Documentation (Digital)	Capturing and editing real-world environmental scenes
Hybrid Techniques	Scanning analogue work into digital software for enhancement or publication

How Analogue and Digital Media Reflect Societal Problems in Art

1. Analogue Media and Societal Reflection

Analogue media involves traditional, physical art-making techniques such as drawing, painting, printmaking, and collage.

How Analogue Reflects Societal Problems

- **Emotional Authenticity:** The raw, tactile nature of analogue media can evoke deep emotional responses, helping audiences connect personally with issues such as poverty, injustice, or war.
    - *Example:* A charcoal portrait of a refugee might convey vulnerability through expressive mark-making.
- **Historical Continuity:** Analogue methods connect to past social movements (e.g., protest posters, street murals, activist printmaking).
    - *Example:* Linocuts have been used by movements like the Mexican muralists or South African resistance art to highlight oppression.

- **Community Engagement:** Murals, posters, and zines are accessible and often created within or for communities.
    - *Example:* A painted community mural about gender equality can promote solidarity and local discussion.
- **Slowness and Reflection:** The manual process encourages thoughtfulness and care, symbolizing resistance to fast-paced, consumerist culture.

2. Digital Media and Societal Reflection

Digital media includes art made or manipulated using computers, tablets, or mobile devices, involving tools like digital drawing software, photo editing, graphic design, and animation.

How Digital Reflects Societal Problems:

- **Mass Communication:** Digital artworks can go viral, spreading awareness quickly across global platforms.
    - *Example:* Instagram art series tackling climate change or police brutality.
- **Data and Design:** Infographics and data visualizations help explain complex issues (e.g., wealth inequality, environmental damage) in a visual, digestible way.
    - *Example:* A digital poster visualizing CO_2 emissions per country encourages action through clarity.
- **Accessibility and Inclusivity:** Artists from around the world can share work without gatekeepers, giving voice to diverse perspectives.
    - *Example:* A queer artist in a repressive country can create digital art expressing identity and resistance anonymously online.
- **Augmented Reality and Interactivity:** Digital tools allow viewers to engage actively with content, creating deeper awareness.
    - *Example:* Interactive web art about mental health that changes based on the viewer's input.
- **Satire and Memes:** Digital art can use humour, irony, and remix culture to critique systems like capitalism, surveillance, or misinformation.

Both **analogue** and **digital media** offer artists the means to **expose, document, and challenge societal problems**.

- **Analogue** emphasises emotion, tradition, and hands-on engagement.
- **Digital** excels in reach, speed, and innovation.

Learning Tasks

Mini-Project for Week 13

Title: "Truth and Technology: Exploring Digital Misinformation"

Duration: 2 hours

Project Brief/ Theme: "Truth in the Digital Age"

Create artwork addressing digital misinformation using both traditional and digital media techniques. Your work should explore how different media forms can comment on the nature of truth in today's information environment.

Specific Social Issues and Approaches

Choose one of these issues to address in your artwork:

Health Misinformation

Problem: False health information spreading through social media leading to dangerous self-medication practices

Suggested Approach: Create a collage combining hand-drawn traditional remedies with digitally altered social media health claims, highlighting the contrast between trusted knowledge and misleading information.

Climate Change Denial

Problem: Misinformation campaigns that distort scientific consensus on climate change

Suggested Approach: Draw a traditional landscape of a local environment, then digitally overlay manipulated graphs or data, creating tension between visible reality and misrepresented statistics.

Election Misinformation

Problem: False information about voting procedures undermining democratic processes

Suggested Approach: Create a hand-drawn newspaper or voting guide, then photograph and digitally alter portions to demonstrate how subtle changes can create misleading content.

Digital Identity Manipulation

Problem: Deepfake technology creating false representations of people's actions or statements

Suggested Approach: Draw traditional portraits, then photograph and digitally distort portions to create "glitches" showing how identity can be manipulated while preserving elements of authenticity

Other ideas

"Medical Myths"

A hand-drawn illustration of traditional herbal remedies used locally, photographed and digitally overlaid with exaggerated social media health claims. The contrast highlights the difference between cultural medicinal knowledge and fabricated health "miracle cures."

"Vanishing Coast"

A hand-painted watercolour of a local coastal area, digitally modified to show half the image as current reality and half showing projected sea level rise. Includes digitally added "denial" text being washed away by the rising water.

"Your Vote Counts (Or Does It?)"

A collage using actual newspaper headlines about voting, with certain words hand-circled in red, then photographed and digitally altered to change meanings. Shows how subtle changes to election information can create confusion.

"Digital Masks"

Traditional portraits drawn by hand, then photographed and digitally altered with filters or overlays that change identities. Represents how digital manipulation can create false impressions of people and events.

Suggested Materials

Analogue Materials

- Drawing materials (pencils, charcoal, pens)
- Collage materials (newspapers, magazines, scissors, glue)
- Coloured markers or paints
- A4 or A3 paper/cardstock

Digital Tools

- Mobile phones with cameras
- Computers/tablets (if available)
- Printer (for printing digital elements)

Project Structure Activity: Discussion and Planning

- Brief presentation on digital misinformation and example artworks
- Learners select one social issue to address
- Develop sketches considering:
  - Which aspect of misinformation will you address?

- How will hand-made elements represent authenticity?
- How will digital elements represent manipulation?
- How will these elements work together visually?

Phase 2: Artwork Creation
Activity: Creating Hybrid Artwork
Step 1: Analogue Foundation (35 minutes)

- Create a hand-drawn or collaged base layer addressing your chosen issue.
- Use traditional media to represent authentic information or trusted sources.
- Consider incorporating local cultural elements or indigenous knowledge.

Step 2: Digital Integration

- Photograph your analogue work.
- Modify it digitally using simple phone apps or computer software.
- OR add printed digital elements to your hand-created work.
- Use digital elements to show how information can be manipulated.

Step 3: Final Integration

- Combine your analogue and digital elements into a cohesive artwork.
- Add finishing details that strengthen your message.
- Ensure the contrast between authentic and manipulated information is clear.

Phase 3: Documentation
Activity: Brief Artist Statement
Write a short statement (5-8 sentences) explaining:

- The specific issue of misinformation addressed.
- How your media choices reflect the tension between truth and manipulation.
- What message you hope viewers will take away.

Assessment Criteria (Grading Rubric)

Criteria	Excellent (30–27)	Very Good (26–20)	Satisfactory (19–14)	Needs Improvement 13–0)
Concept (10)	Thoughtful exploration of digital concepts with visual impact	Very good exploration of digital concepts with minimal visual impact	Clear message about a specific aspect of misinformation	Simple or no connection to misinformation
Media Integration (10)	Creative fusion where many media choices enhance the message	Very good integration of different media types	Satisfactory integration of different media types	Minimal combination of hand-made and digital elements
Technical Execution (10)	Well-designed artwork showing very good technical skill	A very good artwork showing good technical skill	Fairly designed artwork showing basic technical skill	Simple designed artwork but with technical issues

Differentiation Strategies

- Allow learners to emphasise either analogue or digital elements based on their strengths.
- Provide pre-prepared digital elements for those with limited technology access.
- Offer templates for learners needing additional structure.
- Allow collaboration between learners with complementary skills.

PEDAGOGICAL EXEMPLARS

Group Work/ Collaborative Learning: In convenient groups analyse the various tools, materials and methods used for creating digital and analogue artworks for class presentation. Encourage learners to critique and respect other views.

Group Work/ Collaborative Learning: In convenient groups, discuss the multiple uses of the tools, materials and methods used for creating digital and analogue artworks.

Project-Based Learning/Group Work/ Collaborative Learning: In convenient groups, generate a manual and digital table to categorise tools, materials and methods used for creating analogue and digital media in the environments according to their potential multiple usage.

KEY ASSESSMENT

Level 4: Project-Based Task

Project Title: Media Matters: Exploring and Applying Analogue and Digital Processes in Environmental 2D Art.

Practical Artwork Creation (50 marks)

Using a selection of analogue, digital media, or a hybrid of both media and environmental or found material(s) and methods, create a 2D artwork that addresses a current environmental issue (e.g., pollution, consumerism, habitat loss, waste).

Requirements

- Combine analogue and/or digital techniques.
- Integrate at least one environmental or found material (e.g., leaves, plastic, packaging, recycled paper).
- Clearly reflect the issue/theme through the composition, using design elements, materials, and techniques.
- Output: 1 finished 2D artwork (A3 or larger, or digital equivalent), photo/scan submission if not digital.

PLC SESSION 13

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).

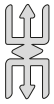
Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app
   a. The key assessment for the week is ***project-based task***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the project (NTS 3k-3q).

10 minutes	Content Exploration

5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then
   a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)
   b. all teachers in the group work through a similar problem individually for 3–4 minutes
   c. the group then works through the problem together step by step
   d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).
   a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.
   b. After the enactment, ask for structured feedback from the group
      i. was the concept explained in a way that a learner with no prior knowledge could follow?
      ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 14

Learning Indicator: *Create 2-Dimensional artwork using multiple methods, including analogue and digital media processes and techniques in response to societal problems*

FOCAL AREA: CREATING 2D ARTWORKS USING ANALOGUE MEDIA PROCESSES AND TECHNIQUES

1. APPLICATION OF ANALOGUE AND DIGITAL MEDIA PROCESSES AND TECHNIQUES

Learners are expected to revisit the contents in the focal areas of Week 13 and apply them in tasks and projects for Week 14.

Learning Tasks

Project for Week 14 and 15: 2-Dimensional Art for Social Change

Title: "Hybrid Voices: Addressing Climate Change Through Analogue and Digital Media"

Duration: 4 hours *(this project will be spread over the 2 weeks)*

Project Brief/Theme: "Climate Crisis and Community Resilience"

Create a 2D artwork that addresses climate change and its impact on local communities. Your work must combine both analogue and digital media processes to communicate an effective message about environmental challenges and potential solutions.

Materials

Analogue Materials

- Drawing materials (pencils, charcoal, ink)
- Natural pigments and earth-based materials
- Recycled papers and found objects
- Pressed leaves, seeds, or other organic elements

Digital Tools

- Digital cameras or smartphones
- Computers/tablets with basic image editing software
- Printers (if available)

Project Structure

Phase 1: Analysis and Exploration

Activity 1: Artwork Analysis

- Examine examples of artworks addressing climate change.
- In mixed-ability groups, discuss:
  - How do these artworks combine analogue and digital techniques?
  - What environmental message is being communicated?
  - How do media choices enhance the message?
- Share analyses with the class.

Activity 2: Environmental Challenge Discussion

- Discuss climate change and community impacts:
  - Local environmental changes observed
  - Traditional knowledge about environmental stewardship
  - Deforestation and biodiversity loss
  - Sustainable solutions and community resilience
- Identify specific aspects to address in your artwork

Phase 2: Media Experimentation

Activity: Technique Exploration

Rotate through stations exploring different media combinations:

Station 1: Natural-Digital Integration

- Incorporating natural materials (soil, leaves) with digital imagery
- Creating environmental textures for digital enhancement

Station 2: Data Visualization

- Hand-drawing climate data patterns
- Adding digital overlays of actual environmental statistics

Station 3: Traditional-Modern Techniques

- Using traditional art techniques in Ghana with digital documentation
- Creating environmental symbols that combine cultural and modern elements

Station 4: Visual Storytelling

- Sketching environmental narratives showing past, present, and future
- Planning visual metaphors for climate impacts and solutions

Phase 3: Artwork Creation

Activity: Multi-Media Artwork Development

Create a 2D artwork addressing climate change using both analogue and digital processes.

Requirements

1. Must incorporate both analogue and digital media processes.
2. Must clearly communicate a message about climate change and community resilience.
3. Must demonstrate thoughtful media choices that enhance the message.
4. Must document your process showing integration of different media.

Visual Element Suggestions

Human Figures

- **"Climate Guardians"**: Hand-draw traditional elders or youth activists, then add digital elements showing their environmental knowledge or actions.
- **"Generational Impact"**: Create a family portrait where different generations are rendered in different media (elders in traditional drawing, youth in digital) to show changing relationship with environment.
- **"Community Adaptation"**: Depict figures engaged in sustainable practices with digital overlays showing how these practices reduce climate impacts.

Animals

- **"Endangered Heritage"**: Hand-draw local endangered species with digital elements showing habitat loss statistics.
- **"Animal Migrations Disrupted"**: Create traditional illustrations of migratory animals with digital mapping of how climate change alters their routes.
- **"Wildlife and Warming"**: Develop a mixed-media piece showing how local wildlife adapts (or fails to adapt) to changing temperatures.

Buildings and Architecture

- **"Sustainable Structures"**: Contrast traditional hand-drawn housing with digitally enhanced sustainable architecture.
- **"Rising Waters"**: Create buildings using traditional materials with digital water level projections.
- **"Community Resilience Hub"**: Design a community building that incorporates both traditional wisdom and modern sustainable technology.

Landscapes

- **"Seasons Shifted"**: Create a split landscape showing traditional seasonal patterns versus new climate-altered seasons.
- **"Forest to Farm to Desert"**: Develop a landscape transformation sequence using different media for each stage.
- **"Sacred Places at Risk"**: Depict local sacred natural sites with digital elements showing climate threats.

Combined Approaches

- **"The Last Harvest"**: Create a rural scene with farmers, animals and traditional buildings affected by changing rainfall patterns.
- **"Urban Heat Island"**: Contrast hand-drawn natural cooling elements (trees, water) with digital thermal imaging of urban areas.
- **"Water Stories"**: Develop a river landscape with human figures and wildlife showing how water connects all elements, with digital data on changing water patterns.

Phase 4: Documentation and Reflection (30 minutes)

Activity: Process Documentation

Document your creative process and final artwork:

1. **Media Process Documentation:**
   - Photographs showing development stages
   - Notes on techniques used and challenges faced
   - Explanation of how analogue and digital processes were integrated

2. **Environmental Message Statement:**
   - Description of the specific aspect of climate change addressed
   - Explanation of visual symbols and metaphors used
   - Intended impact on viewers

Assessment Criteria (40 Marks)

Criteria	Excellent (40–35)	Very good (34–25)	Satisfactory (24–15)	Needs Improvement (14–0)
Media Integration (10)	Natural–digital combinations with clear purpose	Very good media combinations with a purpose	Basic media combinations with a purpose	Basic media combinations but no clear purpose.
Technical Execution (10)	Excellent use of multiple techniques	Very good technical application	Satisfactory technical application	Issues with technical application
Social Message (10)	Clear, compelling environmental message	Compelling environmental message	Basic environmental message	Basic environmental message with no impact
Process Documentation (10)	Comprehensive documentation with reflection	Very good documentation with little reflection	Minimal documentation with little reflection	Little documentation without reflection

Differentiation Strategies

- Offer various entry points for digital creation based on technology access.
- Provide templates or starting points for learners needing additional structure.
- Allow flexibility in the balance between analogue and digital components.
- Ensure materials and digital tools accommodate diverse abilities.
- Create buddy systems pairing learners with different strengths.

PEDAGOGICAL EXEMPLARS

Problem-Based Learning/Project-based Learning: In gender-balanced groups, identify a problem/challenge within the community that art and design work done with multiple methods, including analogue and digital media processes and techniques can be used to address.

Project-Based Learning; Group Work/ Collaborative Learning: In small groups, create a photo album of artworks in the community done with multiple methods, including analogue and digital media processes and techniques to address problems in the community.

Project-Based Learning: Create art and design works with multiple materials and methods, including analogue and digital media processes and techniques to address selected problems in the community.

KEY ASSESSMENT

Level 3: Research and Documentation

Analyse the social problem, develop the concept and select appropriate analogue or digital for the following 2-D production tasks

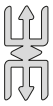
Concept Development and Media Exploration

- Develop two conceptual approaches to addressing the identified problem through 2D art.
- Experiment with at least 5 different combinations of analogue media (e.g., drawing, painting, printmaking, collage) and 5 different digital media techniques (e.g., digital photography, vector graphics, digital painting, image manipulation).
- Document your experimental process, including failed attempts and breakthrough moments
- Select and justify your final media combination based on conceptual alignment, technical possibilities, and potential impact.

PLC SESSION 14

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app

a. The key assessment for the week is ***research and documentation***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the assessment (NTS 3k-3q).

10 minutes	Content Exploration

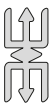
5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then

a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 15

Learning Indicator: *Create 2-Dimensional artwork using multiple methods, including analogue and digital media processes and techniques in response to societal problems*

FOCAL AREA: CREATING 2D ARTWORKS DIGITAL MEDIA PROCESSES AND TECHNIQUES

Content Standard: Learners are expected to revisit the contents in the focal areas of Week 13 and apply them in tasks and projects for Week 15.

Learning Tasks:

Continuation of the Project for Weeks 14 and 15

Project for Week 14 and 15: Hybrid-Media Art for Social Change

Title: "Hybrid Voices: Addressing Climate Change Through Analogue and Digital Media"

Duration: 4 hours *(this project will be spread over the 2 weeks)*

Project Brief/Theme: "Climate Crisis and Community Resilience"

Create a 2D artwork that addresses climate change and its impact on local communities. Your work must combine both analogue and digital media processes to communicate an effective message about environmental challenges and potential solutions.

PEDAGOGICAL EXEMPLARS

Problem-Based Learning/Project-based Learning: In gender-balanced groups, identify a problem/challenge within the community that art and design work done with multiple methods, including analogue and digital media processes and techniques can be used to address.

Project-Based Learning; Group Work/ Collaborative Learning: In small groups, create a photo album of artworks in the community done with multiple methods, including analogue and digital media processes and techniques to address problems in the community.

Project-Based Learning: Create art and design works with multiple materials and methods, including analogue and digital media processes and techniques to address selected problems in the community.

KEY ASSESSMENT

Level 3: Multiple Choice Questions

1. The most effective mixed-media artwork addressing water pollution combines…

A. Hand-drawn waterways with digital chemical data overlays.

B. Digital pollution photos with hand-painted cultural symbols.

C. Watercolour wildlife with scientific text digital elements.

D. News article collage with hand-drawn community portraits.

2. Select the artwork approach for ocean plastic waste that best integrates both media types…

A. Digital waste photos with hand-applied timeline elements.

B. Traditional paintings with digital plastic data projections.

C. Plastic waste sculptures with digital consumption statistics.

D. Ocean current animations with hand-drawn waste elements.

3. For a deforestation artwork, the media selection that best matches content would be…

A. Digital time-lapse photos with hand-drawn tribal symbols.

B. Tree bark drawings with digital images on synthetics.

C. Hand-painted forests with digital deforestation overlays.

D. Historical photos with hand-drawn regeneration elements.

4. A sophisticated artwork about gender inequality should incorporate…

A. Digital wage visualisations with hand-sewn narratives.

B. Hand-drawn portraits with digital statistical elements.

C. Textile artworks with digital workplace data integration.

D. Narrative drawings with digital comparison projections.

5. The conceptual message about urbanisation's community impact is best enhanced through…

A. Architectural drawings with digital interaction overlays.

B. Urban development models with hand-applied traditions.

C. Hand-drawn spaces transforming into digital environments.

D. Community photographs with digital fragmentation data.

6. The relationship between medium and message in digital privacy artwork is best shown by…

A. Interactive digital work revealing viewers' data exposure.

B. Hand-drawn portraits with digital surveillance elements.

C. Surveillance paintings with digital legislation links.

D. Crafted screens with digital data collection projections.

7. An effective artwork addressing food security would feature…

A. Digital food maps with hand-drawn farming solutions.

B. Traditional paintings with digital nutritional overlays.

C. Hand-drawn seed packets with digital cultivation data.

D. Food installations with digital inequality projections.

8. To address climate change impacts on coastal communities, the best approach includes…

A. Digital sea renderings with hand-drawn local solutions.

B. Coastal paintings with digital community recordings.

C. Hand-painted shores with digital flooding projections.

D. Erosion photographs with hand-drawn historical maps.

9. The media choice that best communicates educational inequality involves…

A. Digital visualisations with hand-drawn student stories.

B. Classroom material collage with digital resource data.

C. Hand-drawn education maps with digital statistics.

D. School supply art with digital funding projections.

10. A compelling artwork about mental health stigma would combine…

A. Digital brain imagery with hand-written testimonials.

B. Traditional portraits with digital experience animations.

C. Hand-drawn emotions with digital medical integration.

D. Medication installations with digital access projections.

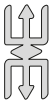
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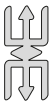
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   a. The key assessment for the week is ***multiple choice questions***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the assessment (NTS 3k-3q).

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WEEK 16

Learning Indicator: *Identify objects from various disciplines of study such as education, engineering, health, architecture, agriculture, etc to record their form and methods of fabrication*

FOCAL AREA: ANALYSING AND DOCUMENTING HOW OBJECTS FROM VARIOUS DISCIPLINES ARE FABRICATED

1. *Three-dimensional representations*
2. *3-D Fabrication methods*
3. 3-D representation and fabrication methods of objects from various disciplines

Introduction

Every discipline creates and uses specialized objects designed to serve specific functions. By studying these objects, their forms, materials, and fabrication methods, one gains insight into how different fields solve problems and how design evolves to meet specialized needs. This exploration helps us understand the relationship between form and function while developing observational and analytical skills essential for art and design.

Benefits of study Objects Across Disciplines

The study of object across diverse disciplines:

- reveals how form follows function in different contexts;
- demonstrates diverse approaches to solving problems through design;
- provides inspiration for your own creative work;
- develops cross-disciplinary thinking and observation skills;
- helps understand fabrication methods that can be applied in your artwork.

Ways to observe and recording objects across disciplines

to be able to identify the real nature of objects used in various disciplines such as education, engineering, health, architecture, agriculture, etc, we have to look at the following:

Form

- Overall Form
- Shape and proportions
- Scale and dimensions
- Symmetry or asymmetry

- Visual weight and balance

Materials used in creating the object

- Primary and secondary materials
- Material properties (flexibility, strength, transparency)
- how these materials helps function of the object
- How materials interact with each other

Fabrication Methods

- How components were created (casting, moulding, machining, etc.)
- How components are joined together
- Evidence of hand-crafting vs. machine production
- Assembly sequence and construction logic

Functional Elements

- How the object's form relates to its purpose
- Moving parts and mechanisms
- Ergonomic considerations
- User interaction points

Decorative elements

- Functional markings or information
- Weathering or wear patterns
- Surface Treatments
- Finishes and coating

Examples of objects used in various disciplines

Education

Teaching Models: Anatomical models, molecular structures, geometric forms

- Form: Often simplified representations of complex systems
- Fabrication: Typically moulded plastics, sometimes with movable parts
- Function: Visualize abstract or internal concepts

Educational Manipulatives: Counting blocks, fraction pieces, letter forms

- Form: Tactile, durable, with clear visual properties
- Fabrication: Wood, plastic, or foam construction with rounded edges

- Function: Provide hands-on learning experiences

Classroom Furniture: Desks, specialized storage, presentation tools

- Form: Designed for specific age groups and activities
- Fabrication: Durable materials with consideration for safety and longevity
- Function: Support learning activities and classroom management

Engineering

Tools and Instruments: Callipers, levels, measuring devices

- Form: Precision-oriented with careful calibration
- Fabrication: Machined metal, often with etched or engraved markings
- Function: Provide accurate measurement and assessment

Mechanical Components: Gears, bearings, fasteners, connectors

- Form: Precise geometries that interact with other components
- Fabrication: Cast, machined, or stamped with tight tolerances
- Function: Transfer force, motion, or energy within systems

Prototypes and Models: 3D printed concepts, material tests, scale models

- Form: Iterative designs showing problem-solving progression
- Fabrication: Rapid prototyping methods, mixed materials
- Function: Test ideas before final production

Health and Medicine

Medical Instruments: Stethoscopes, surgical tools, diagnostic devices

- Form: Ergonomic, precise, often with specialized shapes
- Fabrication: Medical-grade materials, sterilizable, often stainless steel
- Function: Extension of the practitioner's senses or abilities

Prosthetics and Aids: Artificial limbs, hearing aids, mobility devices

- Form: Anthropomorphic or ergonomically designed
- Fabrication: Lightweight, durable materials, often customized
- Function: Replace or enhance human capabilities

Anatomical Models: Skeletal systems, organ models, dental models

- Form: Accurate or simplified representations of body structures
- Fabrication: Cast resins, 3D printing, articulated joints
- Function: Education and planning for procedures

Architecture

Architectural Models: Building maquettes, site models, detail studies

- Form: Scaled representations with varying levels of detail
- Fabrication: Cardboard, foam board, wood, 3D printing
- Function: Visualize spatial relationships and design concepts

Building Components: Door hardware, lighting fixtures, ventilation systems

- Form: Designed to integrate with larger systems
- Fabrication: Mass production with standardized dimensions
- Function: Serve specific roles within the built environment

Construction Tools: Levels, trowels, specialized implements

- Form: Ergonomic, task-specific shapes
- Fabrication: Durable materials with comfortable grips
- Function: Enable precise construction techniques

Agriculture

Hand Tools: Pruners, specialized harvesting tools, seed planters

- Form: Evolved over generations for specific crops or tasks
- Fabrication: Durable materials with consideration for outdoor use
- Function: Extend human capabilities in agricultural tasks

Irrigation Components: Sprinklers, drip systems, water management devices

- Form: Engineered for water efficiency and distribution
- Fabrication: Weather-resistant plastics, metals with precise openings
- Function: Control water flow and distribution

Processing Equipment: Grain mills, separators, specialized containers

- Form: Designed for specific crops and processes
- Fabrication: Food-safe materials, often with moving parts
- Function: Transform raw agricultural products

Methods for Recording Objects

Drawing and Sketching

- Observational Drawings: Capture overall form and proportions
- Detail Studies: Focus on specific components or mechanisms
- Exploded Views: Show how parts relate and assemble

- Cross-Sections: Reveal internal structures and relationships

Photography

- Context Shots: Show the object in its environment
- Multiple Angles: Document all sides and perspectives
- Detail Macro Photos: Capture small features and textures
- Process Photos: Record the object being used or assembled

Measurement and Technical Documentation

- Dimensioned Sketches: Record precise measurements
- Material Notes: Document types of materials and their properties
- Process Diagrams: Record how the object functions or operates
- Construction Sequence: Document assembly order or fabrication steps

Digital Documentation

- 3D Scanning: Create digital models of physical objects
- Photogrammetry: Generate 3D models from multiple photographs
- CAD Recreation: Reverse-engineer objects into technical drawings
- Virtual Reality: Create immersive documentation of larger objects
- Documentation Project: Creating an Object Study

Studying objects across disciplines trains the eye to recognise the relationship between form, function, material, and fabrication. This knowledge builds a foundation for one's own design work and helps one to understand how different fields approach problem-solving through physical objects. The skills developed which includes careful observation, technical documentation, and cross-disciplinary analysis are valuable in many creative and professional contexts.

Extended Project for Weeks 17 and 18: 3D Mixed-Media Solutions for Disciplinary Challenges

Title: "Form & Function: Creating 3D Mixed-Media Solutions Across Disciplines"

Duration: 4 Hours (should be divided across two weeks)**.** *Facilitator to decide what learners should do for each week*

Project Overview: Learners will identify objects from various disciplines, analyse their form and fabrication methods, then create their own 3D mixed-media artwork that addresses a specific challenge within a selected discipline.

Session Structure

Phase 1: Object Analysis and Challenge Identification

Activity 1: Cross-Disciplinary Object Study

1. Divide class into groups, each focusing on one discipline:
    a. Education
    b. Engineering
    c. Health/Medicine
    d. Architecture
    e. Agriculture
2. Each group selects 1-2 objects from their assigned discipline to analyse:
    a. Form: Overall shape, proportions, symmetry, visual weight
    b. Materials: Primary and secondary materials, properties, interactions
    c. Fabrication Methods: Production techniques, joining methods, assembly sequence
    d. Functional Elements: Relationship between form and purpose, mechanisms, ergonomics
3. Groups document their findings through:
    a. Quick observational drawings from multiple angles
    b. Photographs with scale reference
    c. Brief notes on materials and fabrication methods

Activity 2: Challenge Identification

1. Groups identify a specific challenge within their discipline that could be addressed through 3D mixed-media art:
    a. Education: Learning accessibility, concept visualisation, engagement
    b. Engineering: Sustainability, resource efficiency, communication
    c. Health: Patient education, accessibility, wellness promotion
    d. Architecture: Community spaces, environmental impact, heritage preservation
    e. Agriculture: Sustainable practices, resource management, community awareness
2. Each group presents their selected challenge and key insights from their object analysis (3 minutes per group).
3. Brief class discussion on cross-disciplinary connections and solution approaches.

Phase 2: Design Development

Activity 1: Individual Design Development

1. Each learner develops their own solution to their group's identified challenge:
   a. Create sketches from multiple angles.
   b. Identify required materials (conventional and non-conventional).
   c. Plan basic fabrication methods.
   d. Consider how the solution addresses the specific challenge.
   2. Peer feedback within groups
   a. Share initial designs.
   b. Provide constructive feedback.
   c. Refine concepts based on input.

Phase 3: Artwork Creation (120 minutes)

Activity: Mixed-Media Fabrication

1. Learners create their 3D mixed-media artwork using appropriate materials and techniques:
   a. Utilise at least three different materials with contrasting properties.
   b. Apply appropriate fabrication methods for each material.
   c. Consider structural integrity and visual impact.
   d. Document key stages of the process through quick photographs.
2. Teacher circulates to provide technical assistance and guidance
3. Time management reminders at 30-minute intervals

Phase 4: Documentation and Presentation (30 minutes)

Activity 1: Quick Documentation (15 minutes)

1. Learners create brief documentation:
   a. Photographs of the completed artwork from multiple angles
   b. Short written statement (100-150 words) explaining:
      i. The disciplinary challenge addressed
      ii. Materials and techniques used
      iii. How the solution addresses the problem

Activity 2: Gallery Walk (15 minutes)

1. Arrange artworks for viewing.
2. Learners circulate to view all works.
3. Brief verbal sharing of key insights and challenges (selected examples).

Materials and Resources

Physical Materials

- Drawing implements (pencils, pens, paper)
- Cardboard, foam board, clay, or other modelling materials
- Basic tools (scissors, craft knives, adhesives, tape)
- Recycled and found materials for construction
- Measuring instruments (rulers, callipers)
- Specialised tools as needed for specific projects

Digital Tools

- Mobile phones or cameras for documentation
- Simple documentation templates
- Reference images of discipline-specific objects

Assessment Criteria (60 Marks)

Criteria	Excellent (15-20)	Very Good (10-14)	Satisfactory (5-9)	Needs Improvement (1-4)
Analysis & Challenge Identification (20)	Thorough analysis with insightful challenge identification	Clear analysis with relevant challenge identified	Basic analysis with reasonable challenge	Superficial analysis with unclear challenge
Mixed-Media Integration (20)	Sophisticated combination of materials with clear purpose	Effective combination with purposeful material selection	Adequate combination with basic consideration	Limited integration with random material choices
Technical Execution (10)	Exceptional craftsmanship with refined techniques	Well-executed with appropriate techniques	Adequately constructed with suitable techniques	Basic execution with significant flaws
Response & Reflection (10)	Directly addresses challenge with innovative solution	Clearly addresses challenge with effective solution	Relates to challenge with reasonable response	Limited connection to identified challenge

Example Project Outcomes

1. **Educational Resource: "Tactile Mathematics"**

   Challenge: Making abstract mathematical concepts accessible to visually impaired learners

   Approach: 3D mixed-media model combining textured surfaces, movable elements, and audio components

   Materials: Wood, textured fabrics, 3D printed components, embedded audio elements

2. **Engineering Solution: "Waste-to-Wonder"**

   Challenge: Visualising plastic waste impact and recycling solutions **Approach:** Sculptural installation made from collected plastic waste, transformed into functional water filtration demonstration **Materials:** Recycled plastics, metal components, transparent containers, living plants

3. **Health Communication: "Inside Out"**

   Challenge: Helping patients understand internal biological processes

   Approach: Interactive anatomical model with removable layers and tactile elements

   Materials: Clay, silicone casting, fabric, electronics for lighting key areas

4. **Architectural Model: "Community Memory Hub"**

   Challenge: Preserving cultural heritage while creating modern community spaces

   Approach: Scale model of community centre incorporating historical elements and modern sustainability features

   Materials: Reclaimed wood, 3D printed components, digital projection elements, recycled materials

5. **Agricultural Awareness: "Soil Stories"**

   Challenge: Visualising soil health and sustainable farming practices

   Approach: Cross-section model showing below-ground ecosystems and farming impacts

   Materials: Natural soils, recycled containers, living plants, digital information components

   Teaching Notes

   - Emphasise quality over complexity given the time constraints
   - Encourage thoughtful material selection based on properties and sustainability
   - Focus on how form and material choices directly address the identified challenge

- Prepare material stations in advance to maximise creative time
- Consider extending the project with a follow-up session for refinement and more detailed documentation

PEDAGOGICAL EXEMPLARS

Group work/ Collaborative Learning: In convenient groups, identify and document objects from various professions/disciplines of study such as education, engineering, health, architecture, agriculture, etc.

Problem-Based Learning; Group work/ Collaborative Learning: In mixed-ability groups, use realia, photos and videos to analyse the form and methods of fabrication of objects from various disciplines of study.

Project-Based Learning: In mixed ability groups, generate manuals and digital scrapbooks of 3-D objects from various disciplines of study such as education, engineering, health, architecture, agriculture etc.

KEY ASSESSMENT

Level 4: Research and Fabrication Investigation

Identify objects from various disciplines of study such as education, engineering, health, architecture, agriculture, etc to record their form and methods of fabrication.

A. Research (20 marks)

- Research and identify 8-10 significant objects from at least 5 different disciplines (education, engineering, health, architecture, agriculture, etc.).
- For each object, investigate its historical development, purpose, and cultural significance.
- Select objects that represent diverse fabrication methods, materials, and design approaches.

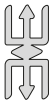
B. Fabrication (30 marks)

- Research and document the specific materials and fabrication methods used for each object identified.
- Interview professionals or conduct secondary research to understand specialized fabrication techniques.
- Create technical diagrams or process documentation illustrating how each object is made
- Analyse how material properties influence form and function.
- Propose alternative fabrication methods and materials and analyse how they would impact form and function.

PLC SESSION 16

45 minutes	Planning & Reviewing the Learning Plan

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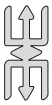
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- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 17

Learning Indicator: *Discuss materials and methods of fabrication in relation to additive and subtractive processes and techniques, together with any other applicable methods for creating 3-Dimensional mix-media artwork*

FOCAL AREA: ADDITIVE AND SUBTRACTIVE PROCESSES IN ART AND DESIGN

1. *Understanding additive and subtractive processes in fabrication*
2. *Materials for 3D Mixed media*
3. *Application of additive and subtractive processes for creating 3-D mixed media*

INTRODUCTION TO FABRICATION PROCESSES

In creating 3D mixed-media artwork, artists employ various fabrication processes that can be broadly categorized into additive, subtractive, and alternative methods. Understanding these processes and how they interact with different materials is essential for developing technical proficiency and creative expression in three-dimensional art.

Additive Processes

Additive processes involve building up or adding materials to create form and structure.

Key Additive Techniques

1. *Assemblage:* This involves combining found objects, manufactured items, or natural materials to create a work of art. This creates meaning through juxtaposition and relationship between components.
2. *Construction:* This involves building structures through systematic addition and modification of materials. It often involves joining similar or different materials to create a unified whole.
3. *Modelling:* It involves the addition of pliable materials to build a form or develop forms. This allows for organic, fluid forms and textural exploration and can be temporary (for mould-making) or permanent part of the artwork

Subtractive Processes

Subtractive processes involve removing material to create form, detail, or negative space.

Key Subtractive Techniques

1. *Carving:* It involves the removal of material to reveal form within an object. It requires planning and visualization of form within material.

2. *Drilling and Piercing:* This involves the creation of holes, perforations, or tunnels through material. It also creates negative space, light effects, or connection points. This can transform the visual weight and transparency of solid materials.

Tools: drills, awls, punches, specialized bits

Alternative and Transformative Processes

Beyond strictly additive or subtractive approaches, many techniques transform materials in other ways.

Key Alternative Techniques

1. *Casting:* This involves the creation of forms by pouring liquid materials into moulds. It allows for reproduction and material transformation.
2. *Bending and Forming:* This involves the reshaping of materials without adding or removing mass. It creates dynamic forms and lines in space.
3. *Heat Manipulation:* It refers to the use of heat to transform materials. This can create organic effects or precise joins

   Techniques include melting, fusing, slumping, or burning.
4. *Digital Fabrication:* This refers to the use of technology to create physical forms. It can be combined with traditional methods in hybrid approaches. It allows for precision and complexity difficult to achieve by hand

   Processes: 3D printing (additive), CNC cutting (subtractive)

Materials for 3D Mixed-Media Art

Different materials respond uniquely to various fabrication processes, offering distinct aesthetic and structural possibilities.

Material Categories and Properties

Wood and Plant-Based Materials

Properties: warmth, grain, varying hardness

Processes: carving, cutting, constructing, burning

Examples: lumber, branches, bamboo, cork, paper products

Metals

Properties: strength, malleability, reflectivity

Processes: bending, cutting, welding, casting, etching

Examples: wire, sheet metal, found metal objects, foils

Clay and Ceramics

Properties: plasticity when wet, permanence when fired

Processes: modelling, carving, slab building, wheel throwing

Can be combined with other materials before or after firing

Plastics and Synthetics

Properties: versatility, transparency, colour options

Processes: cutting, heating, moulding, casting

Examples: acrylic sheet, found plastic objects, resin

Textiles and Fibres

Properties: flexibility, texture, pattern potential

Processes: cutting, stitching, wrapping, weaving

Examples: fabric, yarn, rope, natural fibres

Found and Recycled Objects

Properties: cultural associations, unique forms, sustainability

Processes: assemblage, modification, deconstruction

Brings pre-existing meaning and history to artwork

Combining Processes and Materials

The power of mixed-media sculpture lies in thoughtful combinations of processes and materials.

Effective Combinations:

- Contrasting Materials
- Hard with soft (metal with fabric)
- Transparent with opaque (glass with wood)
- Natural with synthetic (stone with plastic)

Learning Tasks

Mini-Project for Week 17: Dual Processes - Creating 3D Mixed-Media Artwork Through Additive and Subtractive Methods

Title: "Building Up, Carving Away: 3D Mixed-Media Fabrication"

Duration: 2 Hours (*but can extend after the class)*

Project Overview: Learners will explore both additive and subtractive fabrication processes to create a 3D mixed-media artwork that demonstrates thoughtful material selection and technical versatilit. Learners are to be reminded always to start work with ideation and run through the entire design process for their work.

Suggested Materials

For Subtractive Processes

- Carving materials (soap, plaster blocks, soft wood, foam blocks)
- Carving tools (craft knives, wood carving tools, wire loops)
- Sandpaper of various grits
- Files and rasps
- Safety equipment (goggles, dust masks)

For Additive Processes

- Clay (air-dry or polymer)
- Wire and wire mesh
- Card, paper and papier-mâché materials
- Found objects and recycled materials
- Adhesives (PVA glue, hot glue, epoxy)
- Joining materials (wire, string, thread)

For Mixed-Media Integration

- Fasteners (screws, nails, pins)
- Textiles and fibres
- Natural materials (twigs, leaves, shells)
- Paint and surface treatments
- Finishing materials (varnish, wax, sealants)

Session Structure

Phase 1: Material and Process Exploration

Activity 1: Understanding Fabrication Processes

1. Brief introduction to additive and subtractive processes:
   a. Additive: Building up forms by adding material (modelling, assembling, constructing)
   b. Subtractive: Removing material to reveal form (carving, cutting, eroding)

2. Demonstration of basic techniques:
   a. Subtractive: Simple carving demonstration with soap or foam
   b. Additive: Basic clay modelling and armature construction
   c. Combinatorial: How the processes can work together

Activity 2: Material Experimentation

1. Divide class into small groups, each with access to various materials.
2. Each learner creates quick experimental samples:
   a. Subtractive sample: Carve a simple form from foam or soap
   b. Additive sample: Build a small structure using clay or wire
   c. Combination sample: Create a piece using both processes
3. Brief group sharing of discoveries about material properties and techniques

Phase 2: Concept Development
Activity: Theme-Based Design

1. Introduce the theme: "Transformation and Contrast"
2. Learners develop concepts that explore:
   a. Contrasts between natural and manufactured forms
   b. Transformation of materials through different processes
   c. Interplay between positive and negative space
3. Sketching and planning:
   a. Create sketches showing the planned artwork from multiple angles.
   b. Identify which elements will be created through subtractive processes.
   c. Identify which elements will be created through additive processes.
   d. Plan the integration of different materials.
4. Brief peer feedback session on concepts

Phase 3: Artwork Creation
Activity 1: Subtractive Elements

1. Learners begin with subtractive processes:
   a. Select appropriate material for carving based on concept;
   b. Use appropriate tools to remove material and create form;
   c. Consider how negative space will interact with additive elements;
   d. Refine surfaces as needed.

Activity 2: Additive Elements

1. Learners create components using additive processes:
   a. Build forms through modelling, construction or assemblage
   b. Consider structural integrity and connection points
   c. Develop textural and surface qualities

Activity 3: Integration and Refinement

1. Combine subtractive and additive elements:
   a. Join components using appropriate methods
   b. Ensure structural stability
   c. Add finishing details and surface treatments
   d. Refine the overall composition

Phase 4: Documentation and Reflection

Activity 1: Artwork Documentation

1. Photograph completed artworks from multiple angles
2. Create brief documentation noting:
   a. Materials used and why they were selected
   b. Specific subtractive processes employed
   c. Specific additive processes employed
   d. Technical challenges encountered and solutions developed

Activity 2: Gallery and Discussion

1. Display all artworks for viewing
2. Facilitated discussion focusing on:
   a. How different materials responded to various processes
   b. Innovative combinations of additive and subtractive techniques
   c. Relationship between material choices and artistic expression
   d. Technical discoveries and problem-solving approaches

Assessment Criteria (60 Marks)

Criteria	Excellent (15-20)	Very good (10-14)	Satisfactory (5-9)	Needs improvement (1-4)
Process Application (20)	Sophisticated use of both additive and subtractive processes with clear purpose	Effective use of both processes with intentional application	Basic use of both processes with some purpose	Limited or unclear use of required processes
Material Selection (20)	Thoughtful material choices enhancing both processes; excellent understanding of material properties	Appropriate material choices for both processes; good understanding of properties	Adequate material choices; basic understanding of properties	Random material choices showing limited understanding
Technical Execution (10)	Exceptional craftsmanship in both additive and subtractive techniques	Good craftsmanship in most techniques	Adequate craftsmanship with some technical issues	Poor craftsmanship with significant technical problems

Criteria	Excellent (15-20)	Very good (10-14)	Satisfactory (5-9)	Needs improvement (1-4)
Integration & Concept (10)	Seamless integration of processes creating cohesive artwork with strong concept	Good integration with clear concept	Basic integration with simple concept	Poor integration with unclear concept

Example Project Approaches

1. **"Emerging Form"**

   Concept: A figure partially emerging from a block **Subtractive Process:** Carve the block form from plaster or soap **Additive Process:** Build extending elements with wire and clay **Integration:** The carved form appears to be transforming into built elements

2. **"Architectural Excavation"**

   Concept: A structure showing both construction and decay **Subtractive Process:** Carve away sections of foam to create negative spaces **Additive Process:** Build structural elements with cardboard and found objects **Integration:** The piece suggests both building up and wearing away of structures

3. **"Natural/Artificial"**

   Concept: Contrast between organic and manufactured forms **Subtractive Process:** Carve organic shapes from natural materials like wood **Additive Process:** Construct geometric forms using wire, plastic or metal **Integration:** Create dialogue between the organic carved forms and constructed elements

4. **"Inner/Outer"**

   Concept: Revealing internal structures through external forms **Subtractive Process:** Carve exterior shell or housing from block material **Additive Process:** Build internal structures visible through carved openings **Integration:** The relationship between what is revealed and what is constructed

   Teaching Notes

   - Emphasise safety procedures when using carving tools
   - Prepare subtractive materials in appropriately sized pieces to save time
   - Demonstrate joining techniques for combining different materials
   - Encourage experimentation with how processes can interact (e.g., carving into built forms)
   - Have examples of artworks that demonstrate both processes
   - Consider material stations to facilitate efficient access to tools and materials

PEDAGOGICAL EXEMPLARS

Group Work/ Collaborative Learning: In convenient groups that respect different skill sets, analyse the types of additive and subtractive processes, tools, materials and techniques as well as other applicable methods for creating 3-Dimensional mix-media artwork in class discussions.

Problem-Based Learning; Group Work/ Collaborative Learning: Examine 3-Dimensional mix-media artwork done using additive and subtractive processes together with other applicable methods for creating 3-D artwork using photos, videos and realia.

Project-Based Learning; Group Work/ Collaborative Learning: In small groups, generate a manual and digital table to categorise additive and subtractive processes and other applicable methods for creating 3-D artworks.

KEY ASSESSMENT

Level 4: Research and Project-based

Title: "Fusion Forms: Designing and Creating a Mixed-Media 3D Artwork Using Additive, Subtractive, and Alternative Fabrication Techniques"

Objective:

Learners will design, plan, create, document, and present a unique 3D mixed-media artwork using additive, subtractive, and other fabrication methods. They must demonstrate advanced understanding of materials, processes, and how conceptual themes guide the selection and integration of techniques.

Task Requirements:

Research & Proposal (Written/audio/video Report and Mood Board)

- Investigate three different 3D fabrication methods: additive (e.g., clay modelling, 3D printing), subtractive (e.g., carving, etching), and at least one alternative or hybrid method (e.g., assemblage, CNC routing, casting).
- Analyse pros and cons of each method for various materials (wood, plastic, metal, found objects, etc.).
- Develop a conceptual theme for a mixed-media sculpture (e.g., identity, environment, technology vs. nature).

Submit a written/an audio proposal (500–700 words) including:

- Theme explanation
- Choice of materials and justification
- Chosen fabrication techniques and rationale
- Sketches and visual references

Artwork Creation

- Create a 3D mixed-media sculpture (min. size: 12 inches in any dimension).
- Incorporate at least two fabrication methods: one additive and one subtractive, plus optional others.
- Use at least three different materials.
- Keep a process journal (photos, notes, reflections).
- Critical Reflection & Presentation
- Present the final work in an oral critique or video presentation (5–7 minutes).

Explain

- How materials and techniques supported the theme.
- Challenges faced in integrating fabrication methods.
- Evaluation of the artwork's aesthetic, structural, and conceptual success.

PLC SESSION 17

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*

- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app

a. The key assessment for the week is ***research and project-based***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the project (NTS 3k-3q).

10 minutes	Content Exploration

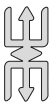
5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then

a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 18

Learning Indicator: *Design and create 3-dimensional mixed media artworks using materials, appropriate tools and processes in response to challenges within selected disciplines of study, such as education, engineering, health, architecture, agriculture, etc.*

FOCAL AREAS:

1. MEDIA PROCESSES AND TECHNIQUES FOR 3-DIMENSIONAL ARTWORKS
2. THE CREATION OF 3-D ARTWORKS THAT ADDRESS SOCIETAL PROBLEMS

CONTINUATION OF: EXTENDED PROJECT FOR WEEKS 17 AND 18: 3D MIXED-MEDIA SOLUTIONS FOR DISCIPLINARY CHALLENGES

Title: "Form & Function: Creating 3D Mixed-Media Solutions Across Disciplines"

Duration: 4 Hours (should be divided across two weeks)**.** *Facilitator to decide what learners should do each week*

Project Overview

Learners will identify objects from various disciplines, analyse their form and fabrication methods, then create their 3D mixed-media artwork that addresses a specific challenge within a selected discipline.

PEDAGOGICAL EXEMPLARS

Problem-Based Learning; Experiential Learning: In small gender-sensitive groups, use available resources to investigate selected disciplines of study to document problems/ challenges that can be addressed with art and design works.

Project-Based Learning: In smaller groups, design and create 3-dimensional mixed media art and design works using scavenged materials from the environment, appropriate tools and processes in response to challenges within selected disciplines of study.

KEY ASSESSMENT

Practice Paper 2

Scenario

Title: "Art Meets Innovation: Solving Real-World Problems Through 3D Mixed-Media Design"

You have been selected as a creative consultant by a local innovation hub that partners with industries such as education, engineering, health, architecture, and agriculture. Your task is to use art and design to communicate and creatively respond to a real-world challenge within one of these fields.

You must design and construct a 3D mixed-media artwork that raises awareness, proposes a solution, or explores the human experience in response to your chosen issue. Your final piece should integrate multiple materials, appropriate tools, and fabrication methods that reflect your chosen discipline.

Assessment Components

1. Research & Problem Identification (Written/audio/video Brief – 200–250 words)
   - Select one discipline (e.g., Health – mental health awareness; Architecture – sustainable housing).
   - Identify a specific challenge in that discipline.
   - Analyse the challenge and explain how visual art and 3D media can engage, inform, or propose creative insight.
   - Propose a concept for a mixed-media artwork that reflects this problem or solution.
2. Design Proposal (Sketches and Plan)
   - Submit preliminary sketches or 3D mock-ups (physical or digital).
   - List materials, tools, and fabrication techniques (additive, subtractive, alternative).
   - Justify choices based on relevance to the discipline and message.



Hint

*Conduct **Practice Paper 2**. It should cover the contents taught from Year 1 to 3. Refer to the **Table of Specification and Structure of the Paper** at the end of this section. Learners' papers should be marked immediately and scores entered into the STP.*

STRUCTURE OF THE PAPER

The Arts and Design Studio would comprise of three papers. Below is a detailed description of each paper:

(I) PAPER 1 (OBJECTIVE TEST)

It comprises **forty Multiple-choice questions** to be answered within **50 minutes** for **40 marks.**

(II) PAPER 2 (ESSAY TEST)

This will comprise **eight questions** and candidates would be expected to answer 4 questions, within **120 minutes for 60 marks.** The paper will be in **three sections** - that is **A, B and C**. **A** comprises Art and Design Theories and applications, B comprises Creative Methodologies and C is creative projects. The candidates would be expected to answer **one (1) question out of 2** from **Section A**, **two (2) questions** out of 3 from **Section B** and **two (2) questions** out of 3 from **Section C.**

(III) PAPER 3: PRACTICAL/ PROJECT WORK

The table below describes the structure of the project work:

Requirement	Assessment
Paper 3: 2-D and 3-D Visual Responses	
Compulsory	**2-Dimensional Visual Response - 15 hours** Paper to be given two weeks before the commencement of the WAEC Examination. **Three project briefs** (questions) will be issued. Candidates will be required to submit TWO responses to one of the three project briefs (questions), with one response being in 2-dimensional form and the other in 3-Dimensional form Candidates are to include explorations of all preliminary studies (artists/ artworks/cultural relics/pop culture) relevant to the chosen theme/media in their examination portfolio. The examination portfolio will comprise of: the 2-D finished artwork, a sketchbook (A3) containing no more than SIX sheets of preparatory sketches and referenced materials album (sources of inspiration) containing no more than FOUR sheets.
	3-D Visual Response - 15 hours Candidates are to include explorations of all preliminary studies (artists/ artworks/cultural relics/pop culture) relevant to the chosen theme/media in their examination portfolio. The examination portfolio will comprise of: the 3-D finished artwork or prototype model a sketchbook (A3) containing no more than SIX sheets of preparatory sketches and referenced materials album (sources of inspiration) containing no more than FOUR sheets.

There is a Project Brief (question paper) for this component.

Candidates choose two starting points to develop into a personal response.

There are two parts to the project:

- Supporting studies, created during the preparation period and
- A final outcome (finished work), produced during a supervised test of 15 hours' total duration.

Candidates are required to provide evidence of their ability to:

- document ideas and observations from direct investigations, including their own drawings and photos, as well as secondary imagery and sources.
- engage in the exploration and experimentation of various media, techniques, and processes.
- conduct thorough research on artists, designers, and cultural influences to inform the development of ideas.
- carefully select, review, and refine their work throughout the entire process to strategically plan and produce a personal and cohesive outcome.

APPENDIX: ART AND DESIGN STUDIO – ITEM SPECIFICATION TABLE (YEAR 1, SEMESTER 1)

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
1	Document the components of Art and Design Studio: Sculpture, Painting, Graphic Design, Textiles, Ceramics, Jewellery, Leatherwork, Pliable Arts (Basketry, Fibres and Fabrics, etc.), Contemporary Art	**Multiple choice**					
2	Document the roles of the various components of the Art and Design Studio	**Multiple choice**	1				
3	Discuss art materials according to nature, technique and purpose	**Multiple choice**		1			
		Essay			1		
4	Discuss the basic methods and techniques in creating 2-Dimensional and 3-Dimensional art and design works.	**Multiple choice**		1			
5	Discuss the basic methods for preparing and storing art media	**Multiple choice**		1			
6	Explain the concept of professional practice in Art	**Multiple choice**					
		Essay		1			
7	Analyse the concept of ethics in Art and Design	**Multiple choice**			1		
8	Identify how art or design studio tasks can be used as an artistic intervention for social problems.	**Multiple choice**	1				
		Essay					
		Practical					
9	Determine possible multiple forms of artworks in Art and Design that can be used to solve identified problems in society	**Multiple choice**		1			
		Essay					
		Practical					
10	Create multiple proposals with accompanying notes in 2-D, 3-D, or mixed-media presentations for possible art and design studio tasks.	**Multiple choice**					
		Essay					
		Practical					

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
11	Examine the workability of conventional and non-conventional tools and materials from the environment that can be used to create 2-D art or design works.	**Multiple choice**		1			
		Essay		1			
12	Design and create 2-D art or design work using conventional and non-conventional materials, tools, and relevant processes to respond to societal problems.	Multiple choice					
		Essay					
		Practical					

ART AND DESIGN STUDIO - ITEM SPECIFICATION TABLE (YEAR 1, SEMESTER 2)

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
13	Identify materials, tools, and relevant processes and techniques used in performing 3D studio tasks	**Multiple choice**	1				
14	Design and create 3D artworks using conventional and non-conventional materials, tools, and relevant processes in response to societal problems	**Multiple choice**					
15	Use a visual medium to create art and design projects with an emphasis on protective and decorative processes.	**Multiple choice**		1			
		Essay				1	
16	Apply safety measures in creating art and design work with special attention to protective and decorative processes to create artwork.	**Multiple choice**					
17	Develop artist statements to reflect portfolio and exhibition.	**Practical**				1	
18	Generate a manual and digital portfolio as evidence of art and design practice.	**Multiple choice**					
19	Use appropriate strategies to mount an art and design exhibition.	**Multiple choice**		1			
20		**Multiple choice**					
		Essay					
		Practical					

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
21		**Multiple choice**					
		Essay					
		Practical					
22		**Multiple choice**					
		Essay					
		Practical					
23		**Multiple choice**					
		Essay					
24		**Multiple choice**					
		Essay					
		Multiple Choice					

ART AND DESIGN STUDIO - ITEM SPECIFICATION TABLE (YEAR 2, SEMESTER 1)

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
1	Examine etiquettes to be observed in Art and Design studio practices and their implication in teaching and learning the subject	**Multiple choice**					
2	Develop an understanding of etiquette associated with Art and Design Studio practices.	**Multiple choice**		**1**			
3	Discuss and apply analogue and digital media in built environments and describe how they are used as basic media for the creation of art and design	**Multiple choice**	**1**				
4	Analyse how selected analogue and digital media in nature and the built environment contribute to solving societal problems through the artworks	**Multiple choice**		**1**			
5	Analyse the concept of professional ethics in design	**Multiple choice**					
6	Analyse the codes and regulations of art and design practices in Ghana	**Multiple choice**			**1**		
7	Analyse antique artworks made in single materials and propose new ways of making such works as mixed media representations.	**Multiple choice**					

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
8	Analyse multiple approaches, material combinations, and techniques for the work, as well as the appropriate mode of presentations.	**Multiple choice**		1			
		Essay					
		Practical					
9	Create multiple annotated mixed media presentations in preferred artistic formats as studio thinking for creating artworks.	**Multiple choice**		1			
		Essay					
		Practical				1	
10	Identify and document image-making, and repetition processes and techniques used to create selected 2-Dimensional art or design works.	**Multiple choice**	1		1		
		Essay					
		Practical					
11	Analyse how image-making and repeat processes and techniques for creating 2-dimensional artworks can be undertaken with relevant tools and materials	**Multiple choice**			1		
		Essay					
12	Create 2-dimensional art or design works with tools and materials with image making and repeat processes and techniques.	Multiple choice					
		Essay					
		Multiple Choice					

ART AND DESIGN STUDIO - ITEM SPECIFICATION TABLE (YEAR 2, SEMESTER 2)

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
13	Identify materials and the appropriate tools that can be used in the subtractive processes of creating 3-dimensional art forms	**Multiple choice**					
14	Review different types of subtractive processes and techniques for performing particular studio tasks and creation of artworks	**Multiple choice**	1				
		Essay		1			
15	Design and Create 3-dimensional artwork with local materials and appropriate tools using subtractive processes and techniques to solve a societal problem	**Multiple choice**					

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
16	Distinguish and record the difference between protective processes and decorative processes in artefact productions.	**Multiple choice**		1			
17	Apply knowledge and skills in safety, maintenance and sustainability in environmental protection and energy conservation (Greening Education).	**Practical**					
18	Apply designing and finishing processes to create an artistic project to solve a social problem	**Multiple choice**				1	
19	Distinguish between portfolio building and exhibition.	**Multiple choice**		1			
20	Mount hardcopy/digital as well as online exhibition of own works and that of others	**Multiple choice**					
		Essay					
		Practical					
21	Generate artist statements and exhibition brochures on own works and that of others	**Multiple choice**					
		Essay					
		Practical					
22		**Multiple choice**					
		Essay					
		Practical					
23		**Multiple choice**					
		Essay					
24		**Multiple choice**					
		Essay					
		Multiple Choice					

ITEM SPECIFICATION TABLE (YEAR 3, SEMESTER 1)

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
1	Learners acquaint themselves with the Copyright Act of Ghana, 2005 (Act 690) Patent Act, 2003 (Act 657) Trademarks Act, 2004(Act 664), Company Act, 2019(Act 992) and their implications for art and design studio practices.	**Multiple choice**	1				

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
2	Investigate the art business registration, its importance and implication for art studio practice	**Multiple choice**		1			
3	Investigate how art laws and policies inform societal development.	**Multiple choice**			1		
4	Research into recipes for making art media from natural and man-made sources.	**Multiple choice**	1				
5	Use computer software applications to simulate the effects of art media	**Practical**					
6	Examine ethical considerations to be observed in art studio practice	**Multiple choice**			1		
7	Discuss the essence of censoring artworks to meet societal ethics.	**Multiple choice**					
8	Discuss embedded sustainable development messages within selected artworks through the analysis of the actual meaning of the image, and reflection and reaction.	**Multiple choice**		1			
		Essay				1	
		Practical					
9	Create innovative and inventive artworks and designs centred on sustainable development using both digital and other media ideations that can stimulate students' consciousness on the relevance of sustainable living	**Multiple choice**		1			
		Essay					
		Practical					
10	Design and create artwork based on the message of sustainability using biodegradable and 80% recyclable waste materials	**Multiple choice**				1	
		Essay					
		Practical					
11	Analyse multiple media processes and techniques used in creating 2-dimensional artworks in the environment	**Multiple choice**		1			
		Essay					
12	Categorise tools, materials and methods for analogue and digital media in the environment, and their potential usage.	Multiple choice					
		Essay					
		Multiple Choice					

ITEM SPECIFICATION TABLE (YEAR 3, SEMESTER 2)

Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
13	Create 2-dimensional artwork using multiple methods, including analogue and digital media processes and techniques in response to societal problems.	**Multiple choice**				1	
		Practical				1	
14	Identify objects from various disciplines of study such as education, engineering, health, etc to record 3-dimensional representation and fabrication methods.	**Multiple choice**					
15	Discuss materials and fabrication methods about-additive and subtractive processes and techniques, together with any other applicable methods for creating 3-dimensional mixed media artworks.	**Multiple choice**				1	
		Essay		1			
16	Design and create 3-dimensional mixed media artworks using materials, appropriate tools and processes in response to challenges within selected disciplines of study such as education, engineering, health, architecture, agriculture, etc.	**Multiple choice**				1	
17	Make a short video presentation to illustrate the characteristics of advanced finishing techniques.	**Multiple choice**					
18	Mount hardcopy/digital as well as online exhibition that reflects selected advanced finishing techniques.	**Multiple choice**	1				
19	Present a short report on the exhibition mounted in relation to advanced finishing techniques.	**Multiple choice**					
20	Identify and analyse the challenges involved in organising digital portfolios.	**Multiple choice**		1			
		Essay				1	
		Practical					
21	Discuss the benefits of a digital portfolio.	**Multiple choice**			1		
		Essay					
		Practical					
22	Identify some contemporary Ghanaian artists who depend largely on portfolio building in their artistic practice.	**Multiple choice**	1				
		Essay					
		Practical					

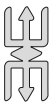
Week	Learning Indicators	Type of Questions	DOK Level				Total
			1	2	3	4	
23		**Multiple choice**					
		Essay					
24		**Multiple choice**					
		Essay					
		Multiple Choice					
	Total		**10**	**22**	**8**	**11**	**51**

MCQs	40
Essay	**8**
Practical	**3**
Total	**51**

PLC SESSION 18

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous session, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand.
   b. identify three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q).
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Use your app to plan and administer the mode of assessment for the Student Assessment Portal (SAP)

a. The key assessment for the week is ***practice paper 2***. Chat with your app to plan this assessment by reviewing or developing the assessment items/tasks and marking schemes/rubrics for the practice paper (NTS 3k-3q).

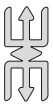
10 minutes	Content Exploration

5. As a subject group, select one problem or topic/idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then
   a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through the problem individually for 3–4 minutes

c. the group then works through it together the problem, step by step

d. highlight the most common errors made at each step (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

Section 5 Review

In Section 5, learners were exposed to a comprehensive framework for developing skills in 2D and 3D art creation, with emphasis on interdisciplinary problem-solving, technical proficiency, and social relevance. The indicators progressed from analysis to creation across multiple media formats. For 2D art, learners analysed and categorised various media processes, techniques, tools, and methods for both analogue and digital media. They later applied this knowledge by creating 2D artworks that integrated multiple methods to address societal problems. Concerning 3D art and design, learners researched objects from diverse disciplines to understand form and fabrication methods. They explored additive, subtractive, and alternative processes for creating mixed-media artwork. This culminated in designing and creating 3D mixed-media artworks that responded to discipline-specific challenges. Major themes included the integration of traditional and digital approaches, a problem-solving orientation, technical resourcefulness, interdisciplinary connections, and continuous skill development.

APPENDIX: MARKING SCHEMES FOR THE KEY ASSESSMENTS

WEEK 12

Grading Rubric (Total: 20 Marks)

Criteria	Excellent (17–20)	Very Good (13–16)	Satisfactory (9–12)	Needs Improvement (1–8)
1. Use of Mixed Media Techniques (4marks) 4-3-2-1 (Across fileds)	Combines 2 or more media (e.g., collage and painting, digital and drawing) in a harmonious, creative way. Media are blended purposefully to enhance the message.	2 or more media used with some integration. Choices support theme reasonably well.	Media techniques used are present but not well integrated. Creative connection is limited.	Media are not clearly combined or used effectively. Weak technical or visual execution.
2. Sustainability Theme Relevance (4marks) 4-3-2-1 (Across)	Theme (e.g., climate action, waste, water) is clearly stated, strongly represented, and explored with depth in the artwork.	Theme is evident and generally connected to the message, though with less depth or clarity.	Theme is touched on but may be vague or underdeveloped. Message not clearly presented.	Theme is unclear, misrepresented, or missing. No strong sustainability connection.
3. Visual and Technical Quality (4marks) 4-3-2-1 (Across fields)	Artwork shows outstanding skill, composition, colour control, and innovative use of materials. Professional finish.	Strong craftsmanship with good attention to detail. Visuals are clean and thoughtfully arranged.	Basic effort shown in execution. Some areas may appear unfinished or rushed.	Poor visual quality. Weak craftsmanship or messy presentation.
4. Presentation Explanation (6marks) 6-5-3-2	Well-organised, clearly delivered presentation (oral, digital, or sign language) that addresses:	Good explanation of techniques and relevance. Some creative insights and attempt at impact reflection	Limited detail or clarity. One or two key aspects (e.g., relevance or process) not well explained.	Vague or unstructured presentation. Most required elements are missing or weakly explained.
Intended Impact & Innovation (2 marks) 2-2-1-1	Message is thought-provoking and inspires action or reflection. Creative innovation in visuals or theme interpretation is evident.	Message is clear and meaningful. Some innovative elements present.	Message is somewhat clear but lacks inspiration or creativity.	Message is confusing, uninspired, or irrelevant to societal impact.

WEEK 13

Assessment Criteria (50 Marks)

Criteria	Excellent (15)	Very Good (10)	Satisfactory (10)	Needs Improvement (15)
Use of tools and techniques (15 marks) 15 - 12 - 9 - 6	Excellent application of at least 2 tools and at least 3 techniques	Very good application of at least 2 tools and at least 2 techniques	Good application of at least 2 tools and at least one technique	Basic application of one tool and one technique
Integration of environmental/ found materials (15 marks) 15 - 12 - 9 - 6	Excellent integration of at least 2 environmental/ found materials	Very good integration of at least 2 environmental/ found materials	Good integration of at least 2 environmental/ found materials	Basic use of one environmental/ found material.
Conceptual clarity and relevance to the identified theme (10 marks) 10 - 8 - 6 - 4	Outstanding conceptual clarity and relevance to the identified theme	Conceptual clarity is relevant to the identified theme	Concept lacks clarity, but is relevant to the identified theme	Concept lacks clarity, and not relevant to the identified theme
Originality and creative expression (10 marks) 10 - 8 - 6 - 4	Profound originality and creative expression	Exhibition of creative expression, though not quite original	Exhibition of commonplace techniques.	Exhibition of minimal commonplace techniques.

WEEK 14

Grading Rubric (20 marks)

Criteria	Excellent (17-20)	Very Good (13-16)	Satisfactory (9-12)	Needs Improvement (1-8)
Conceptual Approaches (5 marks)	Develops two or more innovative conceptual approaches with depth and originality	Develops two conceptual approaches with depth.	Develops one conceptual approach with marginal depth	Presents an underdeveloped conceptual approach
Media Experimentation (5 marks)	Demonstrates extensive experimentation with more than 5 analogue and 5 digital techniques, showing exceptional technical curiosity	Demonstrates good experimentation with at least 5 analogue and 5 digital techniques	Demonstrates average experimentation with 3-4 techniques in each category	Demonstrates limited experimentation with fewer than 3 techniques in each category

Criteria	Excellent (17-20)	Very Good (13-16)	Satisfactory (9-12)	Needs Improvement (1-8)
Process Documentation (5 marks)	Provides comprehensive documentation of process including failures, breakthroughs, and critical decision-making	Provides thorough documentation of process including some failures and decision-making	Provides basic documentation with limited reflection on the process	Provides minimal documentation of experimental process
Media Selection Justification (5 marks)	Presents clear and excellent justification for media choices with compelling connections to concept and potential impact.	Presents clear justification for media choices with good connections to concept.	Presents basic justification with limited connections to concept.	Presents minimal justification for media choices.

WEEK 15

KEY

Question	Answer
1	A
2	C
3	B
4	C
5	C
6	B
7	C
8	C
9	B

WEEK 16

Research and Selection (20 marks)

Criteria	Excellent (16-20)	Very Good (10-15)	Satisfactory (7-9)	Needs Improvement (1-6)
Disciplinary Range (5 marks)	Selects highly diverse objects from at least 5 disciplines with exceptional attention to variety of form and function	Selects diverse objects from at least 5 disciplines with good variety	Selects objects from 3-4 disciplines with adequate variety	Selects objects from fewer than 3 disciplines with little variety
Research Dept (10 marks)	Conducts comprehensive research on each object (8-10), including historical, cultural, and technical contexts	Conducts good research on 5 - 8 objects with good contextual information	Conducts below average research with limited contextual information	Conducts minimal research with no contextual information
Selection Justification (5 marks)	Provides clear and comprehensive justification for selections with insightful connections between objects and disciplines	Provides good justification with good connections between objects	Provides little justification with limited connections	Provides no justification with limited rationale

B. Fabrication Investigation (30 marks)

Criteria	Excellent	Very Good	Satisfactory	Needs Improvement
Material Documentation (5 marks) 5 - 4 - 3 - 2	Provides comprehensive documentation of materials with expert-level detail and technical accuracy	Provides satisfactory documentation with good technical detail	Provides little documentation with little technical information	Provides little documentation with inaccuracies
Fabrication Research (5 marks) 5 - 4 - 3 - 2	Conducts exceptional research on fabrication methods, including primary sources and expert interviews	Conducts good research on fabrication methods, using only secondary sources	Conducts little research on fabrication methods with secondary sources	Conducts little research on fabrication methods with little or unreliable sources
Technical Diagrams (10 marks) 10 - 8 - 6 - 4	Creates excellent quality technical diagrams that clearly illustrate complex fabrication processes	Creates good-quality diagrams that illustrate simple fabrication processes	Creates basic diagrams that do not clearly illustrate simple fabrication processes	Creates low quality diagrams that do not illustrate simple fabrication processes

Criteria	Excellent	Very Good	Satisfactory	Needs Improvement
Material/Form Analysis (5 marks) 5 – 4 – 3 – 2	Provides sophisticated analysis of how material properties influence form and function with nuanced insights	Provides clear analysis with good understanding of material–form relationships	Provides basic analysis with limited understanding	Provides minimal analysis with no clear understanding
Alternative Fabrication (5 marks) 5 – 4 – 3 – 2	Proposes innovative alternative fabrication approaches with comprehensive analysis of potential impacts.	Proposes thoughtful alternatives with good analysis of impacts	Proposes basic alternatives with limited analysis	Proposes minimal alternatives with poor analysis

WEEK 17

Grading Rubric (100 marks total)

Criteria	Excellent	Very Good	Satisfactory	Needs Improvement
Research & Proposal (25) 25 – 20 – 15 – 10	Insightful analysis of methods and materials; highly creative concept; clear rationale	Solid research and planning; clear connection to theme	Basic research; limited depth; theme loosely connected	Minimal or disorganized research; unclear concept
Artwork Execution (30) 30 – 25 – 15 – 10	Professional craftsmanship; seamless integration of techniques; strong visual impact	Good technique; materials and processes clearly integrated	Adequate construction; some flaws in technique or cohesion	Poorly constructed; techniques not effectively used
Use of Methods (20) 20 – 15 – 10 – 5	Sophisticated use of additive and subtractive processes + one other; innovative combinations	Clear application of required processes; some experimentation	Processes used adequately but without depth	Processes underused or not clearly evident
Reflection & Presentation (15) 15 – 12 – 9 – 5	Highly articulate; deep insights; clearly explains decisions and challenges	Clear presentation with thoughtful reflection	Basic explanation; limited depth	Vague or poorly delivered reflection
Process Documentation (10) 10 – 8 – 6 – 4	Detailed, thoughtful journal with photos and commentary	Well-documented with consistent notes	Some gaps in documentation	Incomplete or missing process journal

Materials/Tools (Suggested)

Clay, foam, plaster, wood, plastic, cardboard, wire, found objects

Carving tools, modelling tools, glue, and adhesives

Access to digital tools (optional): laser cutter, 3D printer, CNC, etc.

Sketchbook, camera/phone, presentation software (e.g., Google Slides, Canva)

WEEK 18

Grading Rubric (100 Marks Total)

Criteria	Excellent (A)	Very Good (B)	Satisfactory (C)	Needs Improvement (D/F)	Marks
Problem Identification & Research	Deep analysis of real-world issues; strong interdisciplinary link; excellent use of sources (18-20)	Clear understanding; world issues are well-explored (15-17)	Issue identified; some research used (10-14)	Vague or incomplete issue; little or no research (1-9)	/20
Design Proposal & Justification	Innovative concept; sketches and methods linked to the challenge (18-20)	Good design with some creative ideas and clear planning (15-17)	Basic idea and planning; limited connection to the challenge (10-14)	Weak or incomplete design plan; little relevance (1-9)	/20
Artistic Execution & Technical Skill	Exceptional craftsmanship; sophisticated use of materials/ tools (20-25)	Good quality, clear intent and effort (15-19)	Adequate construction; flaws visible (10-14)	Poor construction; little attention to technique (1-9)	/25
Integration of Materials and Processes	Thoughtful, purposeful use of mixed media and techniques (12-15)	Mixed media used well with minor inconsistencies (10-11)	Some attempt to vary materials, with simple techniques (8-9)	Materials/ processes not integrated or underused (1-9)	/15
Reflection & Presentation	Insightful and articulate, strong critical evaluation (8-10)	Clear and thoughtful; explains choices well (6-7)	Limited analysis; somewhat reflective (4-5)	Unclear, superficial, or missing (1-3)	/10

Criteria	Excellent (A)	Very Good (B)	Satisfactory (C)	Needs Improvement (D/F)	Marks
Process Documentation	Complete, detailed portfolio; excellent reflection and visuals (8–10)	Good documentation, shows process and growth (6–7)	Some documentation, but lacks depth or consistency (4–5)	Incomplete or disorganised documentation (1–3)	/10

Examples of challenging ideas by discipline:

Discipline	Challenge/Focus
Education	Inclusive learning tools for neurodivergent students
Engineering	Visualising sustainable energy systems in 3D
Health	Raising awareness of chronic illness or mental health
Architecture	Model of disaster-resistant shelter for flood zones
Agriculture	Sculptural representation of food waste or soil erosion

SECTION 6: ADVANCED FINISHING TECHNIQUES AND EXHIBITION

STRAND: CREATIVE PROJECT

Sub-Strand: Artefact Production

Learning Outcome: *Use knowledge and skills acquired in advanced Finishing Techniques/Processes to create an art or design work for functional and aesthetic purposes.*

Content Standard: Demonstrate knowledge and understanding of advanced Finishing Techniques/Processes to create art or design work for functional and aesthetic purposes.

INTRODUCTION AND SECTION SUMMARY

This three-week exploration focuses on advanced finishing techniques in art and design, progressing from documentation through presentation to critical reflection. Beginning with video production, learners will develop technical documentation skills whilst demonstrating a comprehensive understanding of sophisticated finishing processes from traditional varnishing and patination to contemporary digital post-production techniques. The section advances to exhibition design and curation, where learners select and display artworks that represent specific finishing techniques. This practical component challenges learners to consider spatial relationships, viewer engagement and professional presentation standards whilst contextualising technical processes within broader artistic frameworks. The section culminates in an analytical component that requires critical reflection through structured reporting, evaluating both technical execution and curatorial decisions. This meta-cognitive exercise develops professional communication skills whilst reinforcing technical understanding through critical analysis. Throughout this sequence, learners develop a comprehensive skill set spanning technical knowledge, curatorial practice and analytical communication that are all essential for professional art practice. By documenting, displaying and analysing advanced finishing techniques, learners demonstrate extended critical thinking whilst building transferable skills applicable across creative industries. This integrated approach ensures a deep understanding of how finishing processes impact both artistic intention and viewer experience.

The weeks and the indicators covered by the section are:

- Week 19: Make a short video presentation to illustrate characteristics of advanced finishing techniques
- Week 20: Mount an exhibition that reflects selected advanced finishing techniques.
- Week 21: Present a short report on the exhibition mounted in relation to advanced finishing techniques.

Recap indicators for the section are:

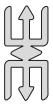
Year 1:	Week 20: Use a visual medium to create an art and design project with an emphasis on protective and decorative processes. Week 21: Apply suitable safety measures when creating art and design work, paying special attention to protective and decorative processes used to create an artwork. Week 24: Use appropriate strategies to mount an art and design exhibition.
Year 2:	Week 20: Applying designing and finishing processes to create an artistic project to solve a social problem. Week 21: Distinguish between portfolio building and exhibition.

SUMMARY OF PEDAGOGICAL EXEMPLARS

This section employs diverse, learner-centred pedagogical approaches that progressively develop learner understanding of advanced finishing techniques through documentation, exhibition and reflection. The pedagogical sequence strategically combines collaborative, experiential and project-based learning to support comprehensive skill development. They begin with collaborative brainstorming, creating an inclusive foundation where mixed-ability groups share knowledge about finishing techniques whilst addressing community challenges through functional art. This approach particularly supports inclusivity whilst developing both technical and social awareness. The project-based learning component transforms this theoretical understanding into practical documentation through video creation, developing digital literacy alongside technical art knowledge. The 'Talk for Learning' approach facilitates critical discussion about exhibition practices, allowing students to verbalise curatorial concepts before implementation. This transitions seamlessly into collaborative exhibition mounting, where learners develop professional presentation skills whilst practising respectful critique and tolerance—essential components of artistic community. Throughout these activities, the pedagogical approaches emphasise both technical skill development and interpersonal competencies, particularly respect for diverse perspectives. This comprehensive approach supports progression through all three learning indicators whilst nurturing inclusive learning environments where learners develop the Level 4 critical thinking skills required for both creative production and analytical reflection.

ASSESSMENT SUMMARY

This section employs a comprehensive assessment strategy evaluating learners' understanding and application of advanced finishing techniques through documentation, exhibition and reflection. For the video presentation (Week 19), assessment uses multimedia evaluation rubrics examining content accuracy, visual demonstration quality and communication effectiveness. This evaluates technical knowledge (DoK Levels 1 and 2), and the ability to explain complex processes clearly at DoK Level 3. The exhibition assessment (Week 20) uses observation protocols documenting learners' curatorial decisions and installation processes. Evaluation criteria include technical execution of finishing techniques, spatial organisation and contextual presentation. This assesses both technical proficiency and strategic decision-making about display approaches at DoK Level 3. The report assessment on Week 21 employs analytical frameworks examining learners' ability to critically evaluate their exhibition experience. Assessment criteria focus on descriptive accuracy, analytical depth and reflective insight, particularly evaluating students' ability to connect technical processes with broader artistic contexts at Level 4. Throughout the weeks, assessment incorporates both practical skill evaluation, conceptual and critical understanding of the activities. This balanced approach ensures thorough measurement of learners' technical knowledge, curatorial abilities and analytical skills while providing authentic assessment contexts that reflect professional art practice standards.



Note

A variety of assessment modes should be implemented to evaluate learners' understanding and performance of the concepts covered in this section. Teachers need to conduct these assessments regularly to track students' progress effectively. You are encouraged to administer the recommended assessments each week, carefully record the results, and submit them to the Student Assessment Portal (SAP) for documentation. The assessments are;

Learning Indicators	DOK Level	Assessment Strategy
Make a short video presentation to illustrate the characteristics of advanced finishing techniques	4	Multimedia Project Assessment
Mount an exhibition that reflects selected advanced finishing techniques.	4	Exhibitions/Displays Assessment
Present a short report on the exhibition mounted in relation to advanced finishing techniques.	4	Research/Report-Based Assessment

WEEK 19

Learning Indicator: *Make a short video presentation to illustrate characteristics of advanced finishing techniques*

FOCAL AREA: CHARACTERISTICS OF ADVANCED FINISHING TECHNIQUES

ADVANCED FINISHING TECHNIQUES IN ART AND DESIGN

Introduction

Advanced finishing techniques are the final steps in art and design, lifting works from simple completion to polished, high-quality pieces. Unlike the basic finishes studied in Years One and Two, these methods go further, enhancing look, durability, surface detail, and meaning.

Modern approaches often blend traditional craft with new technology, culture with function, and science with creativity. Finishes can shift how a piece is seen, through changes in texture, surface, or tone, highlighting features, softening others, or altering the material's feel.

Some, like Kintsugi and Wabi-Sabi, embrace flaws and history, while others use technology to achieve effects beyond traditional means. Mastering these techniques takes skill, material knowledge, and awareness of context. They balance beauty with use, protection with enhancement, shaping the final piece's impact.

Table of Categorisation

The table groups advanced finishing techniques used in art and design. It shows how these methods apply to 2D works, 3D forms, and mixed media. Each category outlines uses, materials, visual effects, skill level, and environmental impact. This structure helps artists choose methods based on their goals and resources. It includes both traditional and modern techniques from around the world. However, more detail is needed on the techniques, media, and their effect on meaning and appearance for full understanding.

Specifics in the categorisation

Technique Category	2D Applications	3D Applications	Mixed Media Applications	Materials Required	Key Aesthetic Effects	Environmental Considerations
Surface Coating	Differential varnishing (matte/gloss)	Patination on metals, Urushi lacquering	Layered varnishes over collage elements	Varnishes, lacquers, waxes, and metal oxides	Depth, protection, luminosity, controlled reflection	Some traditional varnishes contain high VOCs; water-based alternatives are available
Texturing	Impasto application, gesso buildup, sgrafiatto	Flocking, sand blasting, and acid etching	Textural contrasts between flat and dimensional elements	Modelling pastes, texturing mediums, abrasives, and acids	Tactile interest, visual complexity, light/shadow play	Ventilation is needed for some processes; protective equipment is required
Metal Applications	Gold/metal leafing, foil stamping	Electroplating, anodising, and cold casting	Metal elements combined with non-metal substrates	Metal leaf, foils, metal powders, and electroplating solutions	Reflectivity, luxury, visual emphasis, durability	Chemical processes require proper disposal; some contain heavy metals
Heat Processes	Encaustic finishing	Raku firing, Shou Sugi Ban wood charring, Heat-Setting and Pleating	Encaustic over sculptural elements	Waxes, kilns, torches, heat guns	Luminosity, depth, unique surface effects, and weathered appearance	Ventilation critical; fire safety concerns; some emissions
Print Enhancement	Spot UV coating, die cutting, embossing	3D printed textures, CNC surface machining	Combination of print and dimensional elements	UV coatings, dyes, printing presses, and digital fabrication equipment	Tactile contrast, visual hierarchy, interactive elements	UV coatings contain chemicals; digital fabrication is more environmentally friendly
Technique Category	2D Applications	3D Applications	Mixed Media Applications	Materials Required	Key Aesthetic Effects	Environmental Considerations

Technique Category	2D Applications	3D Applications	Mixed Media Applications	Materials Required	Key Aesthetic Effects	Environmental Considerations
Transparent Layering	Glazing techniques, resin coating	Resin embedding, glass overlays	Resin over mixed materials	Transparent pigments, resins, and solvents	Depth, luminosity, preservation of elements	Resins often contain harmful chemicals; proper ventilation is essential
Digital Enhancement	Frequency separation, custom halftones	Photogrammetry texturing, projection mapping	Digital printing on 3D surfaces	Software, digital printers, and projectors	Precision, reproducibility, and dynamic effects	Lower direct environmental impact; consider electronic waste
Traditional Ghanaian	Adinkra stamping, Adire (resist dyeing)	Lost-wax bronze casting, calabash carving	Kente patterns on contemporary forms	Natural dyes, stamps, clay, metals, gourds	Cultural authenticity, symbolic meaning, connection to heritage	Often uses natural, sustainable materials; some processes require water management
Chemical Processes	Chemical toning of photographs	Ceramic glazing, metal patination	Chemical effects on diverse materials	Chemical agents, fixatives, and oxidisers	Unique colour effects, controlled ageing, and material transformation	Proper chemical handling and disposal are critical; some highly toxic
Sustainable Finishing	Natural dye application, low-VOC sealing	Recycled material treatments, solar-cured finishes	Integrated sustainable approaches across materials	Plant-based dyes, water-based finishes, and recycled components	Subtle colouration, ethical production, and material honesty	Minimal environmental impact; often biodegradable
Hybrid Digital/ Manual	Hand embellishment over digital prints	3D printing with hand-finished surfaces	Digital fabrication with traditional finishing techniques	Digital output devices, traditional finishing materials	Precision with human touch, reproducibility with uniqueness	Combines high and low environmental impact processes

Technique Category	2D Applications	3D Applications	Mixed Media Applications	Materials Required	Key Aesthetic Effects	Environmental Considerations
Technique Category	2D Applications	3D Applications	Mixed Media Applications	Materials Required	Key Aesthetic Effects	Environmental Considerations
Protective Finishing	Archival sprays, UV-resistant coatings	Automotive-grade finishing, ceramic coating	Selective protection for different elements	Spray equipment, speciality coatings	Durability, preservation, controlled reflectivity	Many contain harmful chemicals; proper application equipment is needed
Repair as Finishing	Paper/canvas mending as design elements	Kintsugi ceramic repair with gold	Highlighting rather than hiding material history	Adhesives, gold/metal powders, repair materials	Celebrates history, draws attention to imperfection, and material contrast	Often extends the life of objects; reduces waste
Light-Interactive	Phosphorescent/ fluorescent elements	Reflective surfaces, light-sensitive materials	Combining reflective and absorbent surfaces	Light-reactive pigments, reflective materials	Changes with viewing conditions, interactive quality	Some compounds contain rare elements; durability concerns
Aesthetic Philosophy	Wabi-Sabi influenced composition	Intentional imperfection, asymmetry in form	Embracing natural ageing across materials	Various materials with minimal intervention	Authenticity, transience, imperfection as beauty	Highly sustainable; emphasises material honesty and minimal processing
Tactile Contrast	Selective embossing, textural collage	Contrasting surface treatments (rough/smooth)	Juxtaposition of tactile qualities across media	Various texturing tools and materials	Invites touch, creates sensory richness, enhances engagement	Generally low environmental impact depends on specific materials

Notable artists:

Surface coating: Gerhard Richter's glossy photo paintings; Japanese Urushi lacquerware;
patinated bronze sculptures by Barbara Hepworth



Figure 19.1: *Gerhard Richter. MV. 94, (2011). 10 cm x 15 cm. Lacquer on colour photograph.*

Figure 19.1 shows an abstract mixed-media artwork with people walking outdoors. The image shows a group of people, some walking and some standing, in an open area with a brick wall in the background. There are bold, multicoloured streaks and smears of paint in yellow, green, red, and blue, partially spread across the scene and creating a vibrant, layered effect. The paint appears to be applied in a way that both covers and reveals parts of an original photo.

Texturing: Van Gogh's impasto technique; Daniel Arsham's eroded sculptures; Anselm Kiefer's textured mixed media works



Figure 19.2: *Anselm Kiefer. Brünhildes Fels (Brünhildes Rock), 2020–2022*

Emulsion, oil, acrylic, shellac, gold leaf, lead, rope, fabric and chalk on canvas 190 x 280 cm

Figure 19.2 shows a textured painting of a mound or hill, with earthy tones of brown, grey, and ochre. The surface appears rough and layered, with dried leaves or organic material scattered across the foreground. The background is darker, with a hint of orange or rust colour near the top edge, possibly suggesting a sunset or fire.

Metallic Finishes: Gustav Klimt's gold leaf paintings; Jeff Koons' polished steel sculptures; El Anatsui's metal-fabric assemblages



Figure 19.3: *Gustav Klimt, Portrait of Adele Bloch-Bauer, 1907. Oil paint and gold leaf on canvas.*

Figure 19.3 shows a full-length portrait of a woman in an ornate golden gown. The painting is dominated by shimmering gold patterns and geometric shapes, giving it a luxurious and decorative appearance. The woman stands with her hands delicately positioned, her dark hair styled up, and she gazes directly at the viewer with a calm, composed expression. Her dress and the background blend with swirling, mosaic-like gold patterns, featuring rectangles, circles, and eye-like motifs. This is a famous painting by Gustav Klimt titled "Portrait of Adele Bloch-Bauer I."

Print/Digital Enhancement: Stefan Sagmeister's dimensional typography; Andreas Gursky's digitally enhanced photographs; Refik Anadol's projection works

Transparency/Light Interactive: Dustin Yellin's layered resin sculptures; James Turrell's light installations; teamLab's interactive projections

Cultural/Philosophical Approaches: El Anatsui's bottle cap tapestries; Kintsugi ceramic art by

Tomomi Kamoshita; Axel Vervoordt's Wabi-Sabi interiors; Tadao Ando's concrete architecture



Figure 19.4: *Kintsugi Technique of mending ceramic vessels.*

Figure 19.4 shows a purple ceramic bowl with visible cracks repaired using gold. The gold lines follow the cracks, creating a striking pattern against the purple surface. This technique is known as kintsugi, a Japanese art form where broken pottery is mended with lacquer mixed with powdered gold, highlighting the repairs rather than hiding them. The bowl has a glossy finish, and the gold repairs give it a unique, decorative appearance.



Figure 19.5: *Tomomini Kamoshita, From Gift from the Waves (Collection) 2015–2016. Art and Design*

Figure 19.5 shows a decorative object made from several broken ceramic pieces joined together with gold-coloured material. The ceramic fragments are of different colours and patterns, including white with blue geometric designs, pink, green, and plain white. The gold lines highlight the cracks between the pieces, creating a mosaic effect. The object is placed on a background with a repeating geometric pattern in light grey and white. This style resembles the Japanese art of Kintsugi, where broken pottery is repaired with gold to highlight its history.

Sustainability and Ethical Finishes: Aboubakar Fofana's indigo textiles; Sebastian Cox' mycelium furniture; Nienke Hoogvliet's seaweed textiles



Figure 19.6: *Aboubakar Fofana: Indigo Impresario.*

Figure 19.6 shows an art installation featuring tall vertical poles covered in various blue and white patterned fabrics. The poles are arranged closely together on a light-coloured

floor, with small dark objects scattered around their bases. In the background, there is a person standing and observing the installation, dressed in dark clothing. The room has white walls and a window that allows natural light to enter.



Figure 19.7: *Aboubakar Fofana: Indigo Impresario.*

Figure 19.7 shows a stack of three-square throw pillows. The top and bottom pillows are dark blue with light blue geometric and dotted line patterns. The middle pillow is a solid light beige colour with no visible pattern. The pillows are neatly stacked against a plain, light grey background.

Conclusion

Advanced finishing techniques are where craft meets creativity. By experimenting with surface treatments, hybrid materials, and non-traditional processes, artists and designers can push the boundaries of perception and functionality. Mastery of finishing not only enhances the aesthetic value but also defines the professional quality and innovation in any creative work.

Learning Task

Project for Week 19: Advanced Finishing Techniques in 3D Mixed-Media Art
Title: "Perfect Finish: Creating and Documenting Advanced Surface Treatments"
Duration: 2 Hours
Project Overview: Learners will explore, apply, and document advanced finishing techniques for 3D mixed-media artwork, culminating in the creation of a short instructional video presentation showcasing these techniques.

Suggested Materials
Base Materials

- Pre-prepared 3D test surfaces (wood, clay, metal, plastic, fabric)
- Small pre-made 3D forms for technique application

Finishing Materials

- Patinas and chemical treatments
- Gilding materials (gold/silver leaf, size)
- Texturing compounds
- Specialty varnishes and sealants
- Waxes and polishes
- Burnishing tools
- Specialty paints (iridescent, metallic, crackle)
- Decoupage materials
- Image transfer supplies

Documentation Tools

- Mobile phones or cameras for video recording
- Small tripods or phone holders
- Lighting (desk lamps or ring lights)
- Simple backdrop for filming
- Storyboard templates
- Basic video editing apps

Session Structure

Phase 1: Exploration and Planning (30 minutes)

Activity 1: Introduction to Advanced Finishing Techniques (15 minutes)

1. Brief presentation showing examples of advanced finishing techniques:
   - **a.** Patination and chemical treatments
   - **b.** Gilding and metal leaf application
   - **c.** Texturing and surface manipulation
   - **d.** Specialty glazes and varnishes
   - **e.** Burnishing and polishing
   - **f.** Layered finishes and effects

2. Discussion of key characteristics:
   - a. Material compatibility
   - b. Application methods
   - c. Drying/curing requirements
   - d. Safety considerations

e. Visual and tactile effects

Activity 2: Video Planning (15 minutes)

1. Learners select 2-3 finishing techniques to demonstrate
2. Create a simple storyboard for their video presentation:
   a. Introduction showing materials and tools
   b. Step-by-step demonstration of techniques
   c. Close-up shots of finished results
   d. Brief explanation of when to use technique

Phase 2: Technique Application (45 minutes)
Activity: Hands-on Technique Practice

1. Learners apply their selected finishing techniques to test surfaces:
   a. Follow proper application procedures
   b. Document each step with notes or photos
   c. Create multiple samples showing variations
   d. Allow for appropriate drying/curing time
2. Teacher circulates to provide technical assistance and guidance
3. Learners prepare their presentation area while samples are drying/curing

Phase 3: Video Production (30 minutes)
Activity: Recording Demonstration

1. Learners set up their filming area:
   a. Arrange materials, tools, and samples
   b. Set up lighting to clearly show techniques
   c. Position camera/phone for optimal viewing
2. Record video segments following their storyboard:
   a. Introduction (30-45 seconds)
   b. Demonstration of techniques (1-2 minutes)
   c. Results and applications (30-45 seconds)
3. Review footage and re-record any unclear segments

Phase 4: Editing and Finalisation (15 minutes)
Activity: Basic Video Editing

1. Using simple editing apps or in-camera editing:
   a. Trim unnecessary footage
   b. Add title and technique names as text

c. Adjust brightness/contrast if needed
d. Ensure audio is clear (if including narration)

2. Finalise video (1-3 minutes total length)

Phase 5: Sharing and Reflection (30 minutes)

Activity 1: Video Showcase (20 minutes)

1. Class viewing of selected video presentations
2. Brief discussion after each video:
   a. What was most effective about the technique?
   b. What applications would this finishing method be suitable for?
   c. Any tips or modifications suggested?

Activity 2: Reflection (10 minutes)

1. Learners complete brief written reflection:
   a. Most successful technique demonstrated
   b. Challenges encountered
   c. Potential applications in future artwork

Grading Rubric

Criteria	Excellent (8-10)	Very good (6-7)	Satisfactory (4-5)	Needs Improvement (1-3)
Technical Application (10)	Advanced techniques applied with precision and excellent control	Techniques applied correctly with good control	Basic application with minor technical issues	Issues with basic application and major technical issues
Video Demonstration (10)	Clear, well-structured video with excellent visual documentation	Good video presentation with adequate documentation	Basic video with limited clarity or structure	Unclear video demonstration with no clear structure.
Technical Knowledge (10)	Comprehensive understanding of techniques, materials and applications	Good understanding of techniques and appropriate use	Basic understanding with some misconceptions	Little technical understanding with major misconceptions
Creativity & Finish Quality (10)	Exceptional finish quality with creative application of techniques	Good finish quality with appropriate application	Basic finish quality with standard application	Issues with finish quality and application

Example Advanced Finishing Techniques to Feature

1. **Metal Patination**

   Materials: Copper/brass pieces, patina solutions, sealer **Process:** Demonstrate surface preparation, application of chemicals, neutralising, and sealing **Result:** Show various patina effects (verdigris, blue, brown) on metal surfaces

2. **Layered Crackle Finish**

   Materials: Wood base, base colour, crackle medium, top colour, sealer **Process:** Show application sequence, timing considerations, and how to control crackle size **Result:** Display different crackle effects and variations

3. **Gold Leaf Application**

   Materials: Prepared surface, gold size, gold leaf, burnishing tools, sealer **Process:** Demonstrate size application, leaf application, burnishing techniques **Result:** Show both polished and distressed gilding effects

4. **Japanese Shou Sugi Ban (Wood Charring)**

   Materials: Wood piece, torch, wire brush, oil finish **Process:** Show controlled charring, brushing, and finishing with oil **Result:** Display varied charring intensities and textures

5. **Image Transfer on Mixed Surfaces**

   Materials: Printed images, transfer medium, various surfaces, sealer **Process:** Demonstrate transfer process onto wood, clay, and fabric surfaces **Result:** Show how transfers integrate with different base materials

Teaching Notes

- Prepare test pieces in advance to save time
- Have examples of finished samples available for reference
- Consider ventilation needs for chemical finishes
- Set up dedicated areas for different techniques to avoid contamination
- Pre-test all materials to ensure compatibility
- Have quick-drying alternatives available for techniques with long curing times
- Encourage focus on technique documentation rather than elaborate artistic compositions
- Consider creating a class library of the finished videos for future reference

PEDAGOGICAL EXEMPLARS

Collaborative and Experiential Learning: Individually or in small mixed-ability groups, brainstorm and outline the characteristics of advanced finishing techniques. In gender-sensitive groups, identify a problem in the community and create an art and design work for functional and aesthetic purposes.

Project-Based Learning: In small groups, use available resources to create a short video/ photographic/ drawing presentation to illustrate the outlined characteristics of advanced finishing techniques.

KEY ASSESSMENTS

Level 3: Multimedia Project Assessment

Innovative Finishing Solutions Challenge

Task Overview

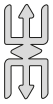
Identify and combine at least three finishing methods to create a unique artwork that showcases both technical skill and creative vision, while documenting your entire creative journey from concept to completion. Documentation of materials, tools, and safety procedures with detailed explanations and alternatives should be presented in written (500 or more words)/oral/video formats. The presentation will be 5 minutes.

PLC SESSION 19

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)

c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app

a. The key assessment for the week is ***project-based task***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the task (NTS 3k-3q).

10 minutes	Content Exploration

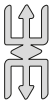
5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then

a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 20

Learning Indicator: *Mount an exhibition that reflects selected advanced finishing techniques*

FOCAL AREA: MOUNTING ADVANCED FINISHED ART AND DESIGN EXHIBITION

Introduction

An art or design exhibition is not only a platform to display creative work but also an opportunity to showcase techniques, concepts, and craftsmanship. When focusing on advanced finishing techniques, the exhibition should highlight how these final processes enhance visual impact, texture, and overall professionalism.

Planning the Exhibition

a. *Theme and Concept*

Define a central theme: "Surface and Detail", "The Final Touch", or "Beyond the Surface"

Ensure all selected works demonstrate clear use of advanced finishing techniques (e.g., foil stamping, glazing, resin, patinas, etc. (Refer to Week 19 (Table of Categorisation) for details).

b. *Selecting Works*

Curate pieces across media (painting, sculpture, fashion, graphic design) that showcase a variety of finishes.

Develop criteria to evaluate selected works on key requirements based on 21st-century ideals. These can include

- clarity of technique(s)
- material(s) used
- craftsmanship
- creativity and originality
- key aesthetic effects, and how the finish transforms or completes the work
- environmental and sustainability considerations

Preparing the Space

a. *Layout and Flow*

- Group artworks based on technique or medium (e.g., one corner for textured painting, another for print finishes).
- Arrange displays to allow viewers to observe surface details up close.
- Use pedestals, lightboxes, and angled walls as needed to emphasise the finish.

b. *Lighting*

- Directional lighting (spotlights or track lights) to highlight gloss, texture, or metallic effects.
- Consider low-glare LED lights to prevent interference with reflective finishes.

Informational Components

a. *Labels and Panels*

Each artwork should include a label stating:

- Title
- Artist's name
- Medium
- Finishing technique used (e.g., "Acrylic on canvas with resin finish")
- Include info panels or QR codes explaining the characteristics and purpose of each featured technique.

b. *Interactive Section (Optional)*

- Include samples or swatches for tactile exploration.
- Create a video or slideshow showing how selected finishes were applied.

Presentation and Atmosphere

a. *Aesthetic Cohesion*

- Choose neutral wall colours or backdrops to avoid distracting from surface details.
- Use consistent fonts and styles for labels and signage.

b. *Sound and Ambience*

- Consider subtle background music to enhance the visitor experience.
- Keep noise low to allow for focus and reflection.

Educational Engagement

a. *Guided Tours or Student Presentations*

- Allow student artists to explain their finishing choices to viewers.
- Use the exhibition as a learning opportunity about technique and craftsmanship.

b. *Feedback and Reflection*

- Provide a comment wall or guestbook for visitors.
- Encourage students to reflect on what they learned about finishing techniques and exhibition design.

  Mounting an exhibition that highlights advanced finishing techniques allows learners to appreciate the importance of detail and professional presentation. It bridges the gap between the creative process and public engagement, teaching learners how finishing choices affect aesthetic value, viewer response, and meaning.

Learning Task

Extended Project for weeks 20 and 21: "Surface Narratives" - Exhibiting and Reporting on Advanced Finishing Techniques

Title: Exhibition Creation and Documentation: Advanced Finishing Techniques as Expressive Tools

Duration: 4 Hours (spread across 2 weeks)

Project Overview

Learners will curate, mount, document, and report on an exhibition of their works featuring advanced finishing techniques, analysing how these techniques enhance artistic expression and contribute to visual storytelling.

Week 20: Exhibition Planning and Installation

Phase 1: Curatorial Planning

Activity 1: Concept Development

1. Form mixed-ability groups of 3-4 learners, ensuring gender balance and inclusion
2. Each group develops an exhibition concept that explores how finishing techniques contribute to artistic expression:
   a. Select a unifying theme or narrative approach
   b. Choose works from previous assignments featuring advanced finishing techniques
   c. Consider how different techniques create varied emotional or conceptual effects

   d. Identify connections between technical choices and artistic meaning

3. Groups create curatorial statements explaining their approach (200-250 words)

Activity 2: Exhibition Design

1. Groups develop detailed exhibition plans:
   a. Create scaled floor plans showing artwork placement
   b. Design a label system that highlights both technical and expressive aspects
   c. Plan visitor flow to emphasise narrative or thematic connections
   d. Consider lighting needs to enhance surface qualities

2. Assign specific roles for the installation process:
   a. Technical coordinator (focusing on the proper display of techniques)
   b. Narrative coordinator (ensuring coherent story/theme)
   c. Documentation specialist
   d. Installation manager

Phase 2: Exhibition Installation

Activity 1: Space Preparation

1. Prepare exhibition space:
   a. Clean and prepare surfaces
   b. Set up display infrastructure (plinths, shelves, hanging systems)
   c. Establish a lighting framework
   d. Mark placement positions

Activity 2: Artwork Installation

1. Install artworks according to the plan:
   a. Position works with consideration for technical visibility
   b. Ensure proper lighting to highlight surface qualities
   c. Create visual connections between related pieces
   d. Install the works securely and professionally

Activity 3: Finishing Touches (15 minutes)

1. Complete exhibition preparation:
   a. Install labels and interpretive materials
   b. Make final lighting adjustments
   c. Create an exhibition title display
   d. Ensure the space is clean and professional

Homework Assignment (Between Weeks)

1. Document initial visitor responses:
    a. Invite 3-5 people to view the exhibition
    b. Record their observations about both technical and expressive aspects
    c. Note questions or points of confusion
    d. Photograph visitors engaging with the exhibition
2. Begin report outline based on the exhibition installation
3. Consider any adjustments needed for week 2

Week 21: Documentation and Reporting
Phase 1: Exhibition Refinement and Documentation
Activity 1: Exhibition Adjustments

1. Based on initial visitor feedback, make refinements to the exhibition:
    a. Adjust labels for clarity
    b. Enhance lighting for better visibility of techniques
    c. Modify the arrangement if the narrative flow needs improvement
    d. Add explanatory elements if needed

Activity 2: Comprehensive Documentation

1. Create thorough documentation of the exhibition:
    a. Professional photographs of the overall exhibition
    b. Detailed shots highlighting specific finishing techniques
    c. Sequence photos showing narrative flow
    d. Document any interactive elements or demonstrations
    e. Record a short video walkthrough (if equipment available)

Phase 2: Report Development
Activity: Analytical Report Creation

1. Using the provided template, develop comprehensive exhibition reports:
    a. Analyse the relationship between finishing techniques and artistic expression
    b. Incorporate visitor feedback and observations
    c. Include a technical analysis of finishing methods
    d. Evaluate the effectiveness of exhibition design in highlighting techniques
    e. Draw critical conclusions on how the technique contributes to meaning
2. Include visual documentation with analytical captions
3. Prepare presentation materials (digital slides or presentation boards)

Phase 3: Report Presentations (30 minutes)

Activity: Formal Presentations

1. Each group presents their exhibition report (5 minutes per group):
   a. Exhibition concept and curatorial approach
   b. Analysis of how finishing techniques supported artistic expression
   c. Key visitor responses and insights
   d. Technical achievements and innovations
   e. Lessons learned about the technique as an expressive tool
2. Brief Q&A after each presentation

Assessment Criteria (60 Marks Total)

Criteria	Excellent (15-20)	Very good (10-14)	Satisfactory (5-9)	Needs improvement (1-4)
Exhibition Design & Installation (20)	Professional display with clear technique-expression connections	Good display showing technique-narrative relationships	Basic exhibition with some technical focus	Poor organisation with minimal technical emphasis
Technical Analysis & Documentation (20)	Thorough documentation with insightful technical-expressive analysis	Clear documentation with good technical analysis	Basic documentation with simple technical notes	Minimal documentation lacking technical detail
Report Quality & Presentation (20)	Sophisticated report with articulate presentation	Clear report with well-delivered presentation	Basic report with adequate presentation	Superficial report with poor delivery

Report Structure Template

1. **Exhibition Overview (200-250 words)**
   - Exhibition title and concept
   - Curatorial approach and thematic focus
   - Range of finishing techniques featured
   - Intended visitor experience and narrative journey
   - Exhibition design strategy
2. **Technical Analysis (250-300 words)**
   - Detailed examination of specific finishing techniques displayed

- Analysis of material properties and surface qualities
- Technical innovations or challenges overcome
- Relationships between different techniques within the exhibition
- How exhibition design enhanced the appreciation of technical elements

3. **Expressive Impact (250-300 words)**
   - Analysis of how finishing techniques contribute to artistic meaning
   - Specific examples of technique-expression relationships
   - Comparison of different techniques and their varied emotional/conceptual effects
   - How surface qualities create or enhance narrative elements
   - Visitor responses to technical-expressive elements
4. **Visual Documentation**
   - Exhibition overview images showing complete installation
   - Detailed photographs highlighting specific techniques
   - Sequence images showing narrative flow
   - Visitor engagement documentation
   - Before/during/after process documentation (if available)
5. **Evaluation and Reflection (200-250 words)**
   - Critical assessment of exhibition strengths and limitations
   - Analysis of visitor feedback and observations
   - Insights gained about the relationship between technique and expression
   - Recommendations for future technical-expressive exploration
   - Personal growth in understanding of finishing techniques as artistic tools

Teaching Notes

- Emphasise that the exhibition should showcase both technical excellence and expressive purpose.
- Encourage critical thinking about how technical choices create meaning.
- Ensure documentation captures both micro (technical detail) and macro (expressive impact).
- Support learners in developing vocabulary that bridges technical and artistic domains.
- Invite visitors from diverse backgrounds to provide varied perspectives.

- Consider creating a digital archive of the exhibition for future reference.
- Encourage learners to view finishing techniques as integral to artistic voice rather than merely decorative.
- Highlight examples where similar techniques create different meanings in different contexts.
- Remind learners that technical excellence should serve expressive purpose.

PEDAGOGICAL EXEMPLARS

Talk for Learning: In mixed-ability groups, discuss how to mount an exhibition that reflects selected advanced finishing techniques.

Project-Based Learning; Collaborative Learning: In convenient groups mount an exhibition that reflects selected advanced finishing techniques. As learners exhibit their works and artefacts, encourage them to respect and tolerate the critique of others.

KEY ASSESSMENT

Level 4: An Exhibition Proposal

Title: Curate, Create, and Critique, An Exhibition Proposal

Assessment Overview

Develop and present a comprehensive exhibition proposal that showcases selected artworks or design pieces using advanced finishing techniques. This task requires strategic thinking, planning, justification of creative choices, and a synthesis of knowledge and skills.

Task Instructions

Complete the following components:

1. **Curatorial Concept** (Written/audio/video Proposal – 300–500 words)
   - Develop a theme or central concept for the exhibition.
   - Explain why advanced finishing techniques are important to your theme.
   - Describe how selected works will connect to the theme.
2. **Exhibition Plan** (Visual & Written/Audio)
   - Create a floor plan or layout sketch of your exhibition space.
   - Group artworks strategically (e.g., by medium, technique, theme).
   - Consider lighting, positioning, and visitor flow.

3. **Artwork Selection** (Minimum 4 pieces)

   Choose at least 4 artworks or design pieces (your own or others').

   For each, include:

   - Title, medium, and artist
   - The advanced finishing technique used
   - A short explanation of how the finishing enhances the work

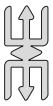
4. **Visual Presentation** (Poster or Digital Slides)
   - Present your concept visually using a poster or slideshow (8–10 slides).
   - Include images, sketches, sample textures/finishes (drawn or photographed), and brief annotations.

5. **Critical Reflection** (Written/Audio – 250 words)
   - Reflect on the process of planning the exhibition.
   - Explain how your decisions show an understanding of finishing techniques, curatorial strategies, and audience experience.

PLC SESSION 20

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app

a. The key assessment for the week is ***an exhibition proposal***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the proposal (NTS 3k-3q).

10 minutes	Content Exploration

5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then

a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).

Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 21

Learning Indicator: *Present a short report on the exhibition mounted in relation to advanced finishing techniques*

FOCAL AREA: (REFER TO YEARS 1 AND 2 AND WEEK 20 OF YEAR 3 FOR CONTENT ON ART EXHIBITION – VIRTUAL OR PHYSICAL).

Learning Tasks

Refer to Extended Project for weeks 20 and 21: "Surface Narratives" - Exhibiting and Reporting on Advanced Finishing Techniques

Exhibition Analysis and Presentation

Title: Exhibition Creation and Documentation: Advanced Finishing Techniques as Expressive Tools

Duration: 4 Hours (spread across 2 weeks)

Project Overview

Learners will curate, mount, document, and report on an exhibition of their works featuring advanced finishing techniques, analysing how these techniques enhance artistic expression and contribute to visual storytelling.

PEDAGOGICAL EXEMPLARS

Talk for Learning: In pairs discuss how to mount an exhibition in relation to advanced finishing techniques. Use mind maps to organise your thoughts.

Experiential Learning; Project-Based Learning: Mount an exhibition that reflects selected advanced finishing techniques. Encourage learners to share their observations and comments in a respectful manner.

KEY ASSESSMENT

Levels 4: Research/Report-Based Assessment

Task Overview

Learners will conceptualize, plan, and execute a small exhibition that showcases advanced finishing techniques in art and design. This project requires critical thinking about curation, presentation, and how finishing techniques communicate artistic intent.

Instructions (One-Week Timeline):

Conceptualization & Planning

- Develop an exhibition theme that highlights advanced finishing techniques.
- Select 3-5 artworks (can include 1-2 of your own works and others from research).
- Create a curatorial statement (300 words) explaining your exhibition concept.
- Design a floor plan showing artwork placement and visitor flow.

Exhibition Development

- Prepare exhibition elements (labels, artwork descriptions, title signage).
- Consider lighting, display methods, and how they enhance the finishing techniques.
- Create one small demonstration piece showing a finishing technique in process.
- Document your preparation process with photos.

Installation & Presentation

- Mount the exhibition in an appropriate space (classroom, hallway, or virtual space).
- Create a brief exhibition guide explaining the finishing techniques featured.
- Conduct a 10-minute guided tour for classmates or other audience.
- Document the final exhibition through photographs or video.

Final Deliverables

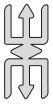
- Mounted exhibition (physical or virtual)
- Curatorial statement and exhibition guide
- Process documentation (planning to installation)
- Guided exhibition tour

PLC Session 21

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).

3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



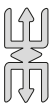
Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app
   a. The key assessment for the week is ***research/report-based assessment***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the assessment (NTS 3k-3q).

10 minutes	Content Exploration

5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then
   a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)
   b. all teachers in the group work through a similar problem individually for 3–4 minutes
   c. the group then works through the problem together step by step
   d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

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- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

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iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

Section 6 Review

This section employed diverse pedagogical approaches to develop learners' understanding of advanced finishing techniques through documentation, exhibition and reflection. The learning journey began with collaborative brainstorming and project-based learning, where learners created video presentations illustrating finishing techniques—developing both technical knowledge and digital documentation skills.

For exhibition development, talk-for-learning discussions established curatorial principles before learners mounted displays showcasing selected techniques. This experiential approach developed practical presentation skills whilst fostering respectful critique and appreciation of diverse artistic expressions.

The section concluded with report creation, where learners reflected critically on their exhibition experience, developing analytical writing skills and deepening technical understanding through structured reflection.

Assessment strategies aligned with learning indicators: multimedia project assessment evaluated video presentations through comprehensive rubrics examining both technical content and presentation quality; exhibition assessment utilised observational protocols and peer feedback forms to evaluate curatorial decisions and display execution; while report assessment employed structured frameworks examining analytical depth and communication clarity.

Throughout all activities, assessment targeted both Level 3 strategic reasoning through systematic application of technical knowledge and Level 4 critical thinking through evaluative reflection and creative problem-solving—ensuring comprehensive development of both practical skills and conceptual understanding.

APPENDIX: MARKING SCHEMES FOR THE KEY ASSESSMENTS

WEEK 19

Research & Planning (20 marks)

Criteria	Excellent (5)	Very Good (4)	Satisfactory (3)	Needs Improvement (1-2)
Research Depth	Thoroughly researches more than 3 advanced finishing techniques with detailed examples	Research 3 advanced finishing techniques with examples	Research 2 techniques with minimal examples	Research 1 technique with no examples.
Documentation	Very good documentation of materials, tools, and safety procedures with detailed explanations and alternatives	Good documentation of materials, tools, and safety procedures with explanations	Satisfactory documentation of materials, tools, and identifies safety procedures without explanations	Inadequate documentation of materials, tools, and identifies few safety procedures without explanations
Design Concept	Very Innovative concept integrating more than 3 techniques with a clear artistic vision	Very good concept integrating 3 techniques with minimal artistic vision	Satisfactory concept integrating 2 techniques with unclear artistic vision	Underdeveloped concept integrating technique with an unclear or no artistic vision
Planning	Excellent sketches and plans showing thorough preparation	Very good sketches, good plan showing good preparation	Satisfactory sketches, minimal plan showing little preparation	Insufficient sketches/plan showing little preparation

Execution (20 marks)

Criteria	Excellent (5)	Very Good (4)	Satisfactory (3)	Needs Improvement (1-2)
Technical Skill	Excellent application of advanced finishing techniques showing exceptional control and precision	Very good application of techniques, showing very good control of media	Satisfactory application of techniques with little control of media	Unsatisfactory application of techniques with little or no control of media
Process Documentation	Comprehensive photographic documentation capturing all significant stages with detailed annotations	Very good photographic documentation of major stages with clear annotations	Satisfactory photographic documentation of stages, minimal annotations	Unsatisfactory or minimal photographic documentation of stages, no annotations

Criteria	Excellent (5)	Very Good (4)	Satisfactory (3)	Needs Improvement (1-2)
Problem-Solving	Exceptional documentation of challenges with innovative, effective solutions	Very good documentation of challenges with effective solutions	Satisfactory documentation of challenges with inapplicable solutions	Minimal or no documentation of challenges/ solutions
Time Management	Excellent use of time, completing all tasks ahead of schedule	Very good use of time, completing 70 - 75% of the tasks	Satisfactory use of time, completing 50 – 69% of the tasks	Unsatisfactory time management, incomplete work

Analysis & Presentation (20 marks)

Criteria	Excellent (5)	Very Good (4)	Satisfactory (3)	Needs Improvement (1-2)
Artwork Completion	Exceptional finished work demonstrating mastery of techniques and outstanding aesthetic quality	Very good finished work demonstrating good command of techniques and good aesthetic quality	Satisfactorily completed work, but with less mastery of techniques and limited aesthetic appeal	Unsatisfactory finished work with less mastery of techniques and aesthetic appeal
Written/Oral/ Video Analysis	Excellent analysis (500 or more words) with exceptional critical reflection on techniques and effectiveness	Very good analysis (500 words) with good critical reflection on techniques and effectiveness	Satisfactory analysis (300-400 words) with limited reflection on techniques and effectiveness	Unsatisfactory analysis (less than 300 words), with no reflection
Presentation Skills	Exceptional 5-minute presentation demonstrating outstanding communication skills and deep understanding	Very good 5-minute presentation with good communication skills and a clear understanding	Satisfactory presentation, but with timing issues and limited communication skills	Unsatisfactory presentation with significant communication issues
Creativity & Innovation	Highly innovative approach demonstrating exceptional creativity and originality	Very good approach demonstrating good originality and thoughtfulness	Satisfactory approach, but with limited creativity	Unsatisfactory approach with limited creativity.

WEEK 20

Grading Rubric (Total: 40 marks)

Criteria	Excellent (10)	Very Good (8–9)	Satisfactory (6–7)	Needs Improvement (1–5)
Curatorial Concept (10)	Strong, original theme with deep insight into how finishing techniques support it.	Clear, logical theme; relates well to finishing techniques.	Adequate theme with basic links to finishing techniques.	Weak or unclear theme; minimal relevance to finishing.
Exhibition Plan/Layout (10)	Layout is highly thoughtful and visually clear; visitor experience is well-planned.	Effective layout with clear grouping and consideration for viewer interaction.	Basic layout with some thought to flow and grouping.	Layout lacks clarity or coherence; little thought to flow.
Artwork Selection & Justification (10)	Artworks expertly chosen and clearly connected to theme; finishing techniques explained in depth.	Good selection with solid explanations of finishing techniques.	Artworks are generally appropriate; basic explanations given.	Weak or random selection; little understanding of finishing evident.
Visual Presentation (5)	High-quality visuals, professional design, and clear communication.	Well-organized and attractive; communicates theme and content well.	Adequate design; communicates most ideas clearly.	Poor visuals or disorganized; hard to follow.
Critical Reflection (5)	Insightful and articulate reflection; deep understanding of process and techniques.	Clear reflection showing thoughtful engagement with the task.	Basic reflection with some understanding shown.	Superficial or incomplete reflection.

WEEK 21

Grading Rubric (Total: 40 marks)

Criteria	Excellent (10)	Very Good (8–9)	Satisfactory (6–7)	Needs Improvement (1–5)
Curatorial Concept (10)	Strong, original theme with deep insight into how finishing techniques support it.	Clear, logical theme; relates well to finishing techniques.	Adequate theme with basic links to finishing techniques.	Weak or unclear theme; minimal relevance to finishing.
Exhibition Plan/Layout (10)	Layout is highly thoughtful and visually clear; visitor experience is well-planned.	Effective layout with clear grouping and consideration for viewer interaction.	Basic layout with some thought to flow and grouping.	Layout lacks clarity or coherence; little thought to flow.
Artwork Selection & Justification (10)	Artworks expertly chosen and clearly connected to theme; finishing techniques explained in depth.	Good selection with solid explanations of finishing techniques.	Artworks are generally appropriate; basic explanations given.	Weak or random selection; little understanding of finishing evident.
Visual Presentation (5)	High-quality visuals, professional design, and clear communication.	Well-organized and attractive; communicates theme and content well.	Adequate design; communicates most ideas clearly.	Poor visuals or disorganized; hard to follow.
Critical Reflection (5)	Insightful and articulate reflection; deep understanding of process and techniques.	Clear reflection showing thoughtful engagement with the task.	Basic reflection with some understanding shown.	Superficial or incomplete reflection.

SECTION 7: WORKING WITH DIGITAL PORTFOLIOS

STRAND: CREATIVE PROJECT

Sub-Strand: Portfolio Building

Learning Outcome: Brainstorm and organise a digital portfolio.

Content Standard: Demonstrate knowledge, understanding and application of current trends in portfolio building in the art world.

INTRODUCTION AND SECTION SUMMARY

This three-week section explores how artists use digital portfolios today, examining challenges, benefits and real-world examples. The section begins by identifying the problems artists face when creating digital portfolios including technical issues like file formats and storage, as well as curatorial decisions about content selection and arrangement for different audiences.

Next, learners will work collaboratively to discover the advantages of digital portfolios, investigating how online collections help artists share their work globally, establish professional connections and advance their careers. Through structured discussions and case studies, learners will learn how digital portfolios support both artistic development and professional opportunities.

Finally, the section examines successful Ghanaian artists who effectively utilise portfolios in their professional practice. This connects theoretical knowledge to contemporary artistic practices in Ghana, providing practical models for emulation.

Throughout these weeks, learners will develop a comprehensive understanding of how digital portfolios function in the contemporary art world. This knowledge supports critical thinking about artistic documentation while building essential professional skills. By analysing challenges, exploring benefits and studying professional examples, students will acquire the foundational knowledge required for effective portfolio creation in future artistic practice.

The weeks and the indicators covered by the section are:

- Week 22: Identify and analyse the challenges involved in organising a digital portfolio
- Week 23: In small groups, discuss and report on the benefits of a digital portfolio.

- Week 24: Using group discussion, identify some contemporary Ghanaian artists who depend largely on portfolio building in their artistic practice

Recap indicators for the section are:

Year 1:	Week 22: Develop an artist's statement to reflect a portfolio and exhibition. Week 23: Generate a manual and digital portfolio as evidence of art and design practice.
Year 2:	Week 22: Mount hardcopy/digital as well as on-line exhibitions of their own art or design works and that of others. Week 23: Generate artist statement and exhibition brochure on their own art or design exhibitions and that of another artist.

SUMMARY OF PEDAGOGICAL EXEMPLARS

This section uses five main teaching approaches to help learners understand digital portfolios:

Talk for Learning starts the process through question-and-answer sessions about portfolio organisation, helping learners build basic knowledge before tackling more complex tasks. Collaborative Learning appears throughout the section, particularly when learners work in groups to analyse portfolio challenges and identify Ghanaian artists who use portfolios. This approach encourages knowledge sharing and develops communication skills. Experiential Learning allows learners to directly engage with digital portfolio challenges, providing hands-on understanding that textbook learning alone cannot deliver. Self-Directed Learning gives students independence to research and present portfolio benefits, developing research skills and personal responsibility for learning. Project-Based Learning forms the practical culmination where students create actual digital portfolios focused on Sustainable Development Goals, applying their theoretical knowledge to real-world tasks. These teaching approaches progress logically from building knowledge (identifying challenges) to understanding benefits (discussing advantages) to seeing real examples (Ghanaian artists) and finally to creating portfolios. This structure helps learners move through all three learning indicators while developing practical skills they can use in future artistic practice.

ASSESSMENT SUMMARY

A variety of assessment modes should be implemented to evaluate learners' understanding and performance of the concepts covered in this section. Teachers need to conduct these assessments regularly to track learners' progress effectively. You are encouraged to administer the recommended assessments each week, carefully record the results, and submit them to the Student Assessment Portal (SAP) for documentation. The assessments are:

Learning Indicators	DOK Level	Assessment Strategy
Identify and analyse the challenges involved in organising a digital portfolio	4	Case Study Assessment
In small groups, discuss and report on the benefits of a digital portfolio.	4	Presentation Assessment
Using group discussion, identify some contemporary Ghanaian artists who depend largely on portfolio building in their artistic practice	4	Research-Based Assessment

WEEK 22

Learning Indicator: *Identify and analyse the challenges involved in organising a digital portfolio*

FOCAL AREA: CHALLENGES IN ORGANISING DIGITAL PORTFOLIOS: IDENTIFICATION AND ANALYSIS

Introduction

Digital portfolios are essential tools for artists, designers, photographers, and learners to showcase their work online. While they offer flexibility, accessibility, and multimedia integration, organising an effective digital portfolio comes with its own set of challenges. Understanding these challenges is crucial to ensure a portfolio is not only visually appealing but also purposeful, user-friendly, and professionally presented.

1. **Content Selection and Curation**

   Challenge Identified:

   Too much or too little content can affect the impact of a digital portfolio.

   Analysis

   - Overloading with too many works may confuse the viewer and dilute your strongest pieces.
   - Including unfinished or low-quality work can harm your credibility.
   - Selecting a cohesive set of works that aligns with the intended purpose (e.g., college application, job interview, personal branding) requires critical thinking and self-awareness.

   Solution: Curate selectively. Only include your best and most relevant works, and update regularly to reflect your growth and focus.

2. **Organisation and Navigation**

   Challenge Identified

   Poor structure and confusing navigation make portfolios difficult to explore.

   Analysis

   - A user may abandon the portfolio if they cannot easily find what they are looking for.
   - Disorganised sections or inconsistent labelling (e.g., "Projects," "Gallery," "Work") can lead to confusion.
   - Lack of logical flow (e.g., by medium, year, theme) reduces clarity.

Solution: Use a clear layout with intuitive categories. Ensure navigation is simple and consistent across all pages or sections.

3. Technical Issues and Accessibility

Challenge Identified

File sizes, formats, and platform compatibility can impact user experience.

Analysis

- Large images or videos can slow down load times, especially on mobile.
- Some viewers may not be able to access certain file formats or embedded media.
- Inconsistent appearance across devices or browsers reduces professionalism.

Solution: Optimise all media for web (compressed images, responsive design). Test on multiple devices and browsers. Use universally accessible formats (e.g., JPG, MP4, PDF).

4. Visual Design and Aesthetic Balance

Challenge Identified

Balancing artistic creativity with clean, professional design.

Analysis

- Overly complex or flashy designs can distract from the actual work.
- Poor typography, inconsistent spacing, or clashing colours can undermine visual harmony.
- Lack of white space or hierarchy makes the portfolio feel crowded or disorganised.

Solution: Follow basic design principles: contrast, alignment, repetition, and proximity. Aim for simplicity and clarity, allowing your work to stand out.

5. Articulation and Presentation of Work

Challenge Identified

Inadequate descriptions or context for the pieces included.

Analysis

- Viewers may not understand the intention or process behind the work.
- Lack of reflection, titles, or project explanations makes it difficult to assess skills.
- Inconsistent formatting of text across entries affects cohesion.

Solution: Include short, clear descriptions for each piece:

- Title
- Medium/Technique

- Objective or Concept
- Challenges and Solutions (optional)
- Date/Project context

6. Platform Limitations and Technical Skills

Challenge Identified

Lack of technical knowledge or limited platform features can constrain creativity.

Analysis

- Not all users are comfortable with website builders, content management systems, or coding.
- Free platforms may have restricted customisation options or display ads.
- Inconsistent user experience due to unfamiliarity with digital tools.

Solution: Choose a platform that matches your skill level and goals (e.g., Adobe Portfolio, Wix, Behance, Google Sites). Consider templates, drag-and-drop tools, or get assistance if needed.

7. Maintaining and Updating the Portfolio

Challenge Identified

Neglecting to keep the portfolio current can harm professional perception.

Analysis

- Outdated content gives the impression of stagnation.
- Broken links or missing files reduce credibility.
- As skills improve, older work may no longer reflect your current level.

Solution: Schedule regular reviews. Set reminders to add new work, remove weaker pieces, and test functionality.

Conclusion

Organising a digital portfolio is not just about uploading work, it is about strategic selection, clear presentation, and thoughtful user experience. By identifying and overcoming these challenges, creatives can craft a digital portfolio that reflects both technical skill and professional polish, making a strong impression on potential clients, schools, or employers.

Learning Task

Extended Project: Digital Portfolio Development and Analysis
Title: "Digital Portfolio Mastery: From Challenges to Professional Practice"
Duration: 6 Hours (*spread across weeks 22-24, 2 hours per week)*

Project Overview

Learners will identify and analyse challenges in digital portfolio organisation, explore the benefits of digital portfolios, research contemporary Ghanaian artists' portfolio practices, and develop their own strategically organised digital portfolios.

Final Products to be Created

1. **Analysis Report** - A detailed document identifying and analysing digital portfolio challenges
2. **Benefits of Digital Portfolios Presentation** - A visual presentation outlining key benefits with examples
3. **Ghanaian Artists Portfolio Research Document** - A research compilation on contemporary Ghanaian artists' portfolio practices
4. **Personal Digital Portfolio** - A functioning digital portfolio showcasing the learner's work with strategic organisation

Week 1: Identification and Analysis (2 hours)
Phase 1: Exploration
Activity 1: Portfolio Challenge Identification

1. Provide learners with access to 3-4 example digital portfolios of varying organisational quality
2. In mixed-ability groups of 4-5, learners examine each portfolio and identify specific organisational challenges:
    a. File management and organisation issues
    b. Image quality and consistency problems
    c. Navigation and user experience difficulties
    d. Content selection and curation challenges
    e. Technical limitations and platform constraints
    f. Accessibility and visibility concerns
3. Groups document their findings in a shared format, noting:
    a. Specific examples of each challenge
    b. Potential impact on portfolio effectiveness
    c. Preliminary ideas for addressing these challenges

Activity 2: Analysis Workshop

1. Each group selects their top 3 challenges to analyse in depth

2. For each challenge, groups complete an analysis worksheet addressing:
   a. Root causes of the challenge
   b. How the challenge affects different portfolio stakeholders (artist, viewers, potential clients)
   c. Technical and organisational factors contributing to the challenge
   d. Resources needed to overcome the challenge

3. Groups create visual documentation (diagrams, flowcharts, or comparison examples) to illustrate their analysis

Phase 2: Benefits of Digital Portfolios

Activity 1: Benefits Exploration

1. In the same small groups, learners discuss and identify the benefits of digital portfolios:
   a. Accessibility and global reach
   b. Cost-effectiveness compared to physical portfolios
   c. Ease of updating and maintaining current work
   d. Multimedia integration possibilities
   e. Analytics and audience insights
   f. Professional networking opportunities
   g. Environmental sustainability

Groups document benefits with specific examples or case studies

Activity 2: Benefits Reporting

1. Each group prepares a concise 3-minute presentation on their identified benefits
2. Groups present their findings to the class
3. Class discussion to compile a comprehensive list of digital portfolio benefits
4. Individual reflection: Each learner notes which benefits would be most valuable for their own practice

Week 1 Products

1. **Analysis Report** (Group Product) - A 2-3 page document with:
   a. Identification of at least 5 specific digital portfolio challenges
   b. Detailed analysis of top 3 challenges with causes and impacts
   c. Visual documentation illustrating each challenge (screenshots, diagrams)
   d. Preliminary solution recommendations

2. **Benefits of Digital Portfolios Presentation** (Group Product) - A visual presentation with:
    a. 5-8 slides highlighting key benefits
    b. Specific examples illustrating each benefit
    c. Case studies or scenarios showing practical applications
    d. Visual elements (charts, images, or infographics)

Week 2: Contemporary Ghanaian Artists and Portfolio Research *(2 hours)*
Phase 1: Research Preparation
Activity: Research Planning

1. Introduce research focus: Contemporary Ghanaian artists who use digital portfolios
2. Form new research groups of 3-4 learners
3. Each group selects a different category of contemporary Ghanaian artists to research:
    a. Traditional artists embracing digital platforms
    b. Digital/new media artists
    c. Photographers and documentarians
    d. Designers and commercial artists
    e. Multi-disciplinary artists
4. Groups develop research questions:
    a. How do these artists organize their digital portfolios?
    b. What platforms do they use?
    c. How do they overcome common challenges?
    d. How has portfolio use impacted their careers?
    e. What unique approaches have they developed?

Phase 2: Artist Research
Activity: Collaborative Research

1. Groups conduct research using:
    a. Online resources and artist websites
    b. Available books and publications
    c. Social media platforms
    d. Video interviews or presentations
    e. Local gallery information

2. Each group must identify and analyse at least 3 specific Ghanaian artists in their category
3. For each artist, document:
    a. Portfolio platform(s) used
    b. Organizational approach
    c. Unique features or strategies
    d. How their portfolio supports their artistic practice
    e. Any innovative solutions to common challenges

Phase 3: Research Sharing (30 minutes)
Activity: Artist Portfolio Presentations

1. Each group creates a visual presentation of their findings
2. Groups present their research on Ghanaian artists' portfolio practices (5 minutes per group)
3. Class discussion identifying patterns, innovations, and cultural considerations in portfolio development
4. Compile a resource document of identified artists and their portfolio approaches

Week 2 Products

1. **Ghanaian Artists Portfolio Research Document** (Group Product) - A comprehensive research document containing:
    a. Profiles of at least 3 contemporary Ghanaian artists in their assigned category
    b. Screenshots or images of each artist's digital portfolio
    c. Analysis of portfolio organization strategies used by each artist
    d. Identification of unique approaches or innovations
    e. Synthesis of patterns or cultural considerations observed
    f. Reference list of sources consulted

2. **Artist Portfolio Presentation** (Group Product) - A 5-minute visual presentation with:
    a. Introduction to researched artists
    b. Visual examples of their portfolio approaches
    c. Analysis of effective strategies identified
    d. Lessons that can be applied to learners' own portfolios

Week 3: Digital Portfolio Development *(2 hours)*

Phase 1: Portfolio Planning

Activity: Strategic Planning

1. Based on previous weeks' learning, each learner develops a strategic plan for their own digital portfolio:
    a. Platform selection with justification
    b. Organisational structure and navigation
    c. File naming and management system
    d. Content selection and curation approach
    e. Technical specifications (image resolution, file formats, etc.)
    f. Solutions to previously identified challenges
2. Learners create a portfolio development checklist
3. Brief peer feedback session on portfolio plans (pairs)

Phase 2: Portfolio Development

Activity: Guided Development

1. Learners begin implementing their portfolio plans:
    a. Set up chosen platform or structure
    b. Organise existing digital assets according to plan
    c. Apply file naming conventions and organisational systems
    d. Prepare selected content following technical specifications
    e. Implement solutions to common challenges
2. Teacher circulates to provide technical assistance and guidance
3. Peer support encouraged for technical challenges

Phase 3: Reflection and Evaluation

Activity: Portfolio Progress Assessment

1. Learners document their progress and reflect on:
    a. Challenges encountered and solutions developed
    b. Benefits they've already experienced from improved organisation
    c. Inspiration drawn from Ghanaian artists' approaches
    d. Next steps for continued development
2. Set goals for portfolio completion beyond class time

Week 3 Products

1. **Portfolio Strategic Plan** (Individual Product) - A detailed document containing:
    a. Platform selection with justification

b. Organisational structure diagram or sitemap
c. File naming convention system
d. Content inventory and curation plan
e. Technical specifications guide
f. Challenge solution strategies
g. Implementation timeline

2. **Digital Portfolio Prototype** (Individual Product) - A functioning digital portfolio with:
   a. Organized structure with clear navigation
   b. At least 8-10 work samples properly formatted and presented
   c. Consistent file naming and organization
   d. Professional presentation of work
   e. Artist statement or introduction
   f. Contact information
   g. Evidence of solutions to previously identified challenges

3. **Reflection Document** (Individual Product) - A 1-page reflection including:
   a. Challenges encountered and solutions implemented
   b. Benefits experienced from improved organization
   c. Influence of Ghanaian artists' approaches on personal portfolio
   d. Goals for future portfolio development

Assessment Criteria

Criteria	Excellent (15-20)	Very good (10-14)	Satisfactory (5-9)	Needs improvement (1-4)
Challenge Analysis Products (20)	Thorough report with insightful analysis and clear visuals	Clear report with good analysis and effective visuals	Basic report with simple analysis and limited visuals	Minimal report with weak analysis and poor visuals
Research Products (20)	Detailed artist profiles with in-depth analysis and engaging presentation	Good artist profiles with clear analysis and effective presentation	Basic profiles with simple analysis and adequate presentation	Minimal profiles with weak analysis and poor presentation
Portfolio Development Products (20)	Strategic plan with professional portfolio implementation	Clear plan with well-organized portfolio implementation	Basic plan with functional portfolio implementation	Minimal plan with incomplete portfolio implementation

Suggested Digital Portfolio Platforms

Free/Low-Cost Options

- Google Sites
- WordPress (free version)
- Behance
- Adobe Portfolio (with Creative Cloud subscription)
- Wix (free version)
- Cargo Collective (free version)

Professional Options

- Squarespace
- Format
- Portfoliobox
- WordPress (premium)
- Custom website with domain

Teaching Notes

- Ensure access to necessary technology and reliable internet.
- Prepare example portfolios showing both effective and problematic organization.
- Compile a preliminary list of contemporary Ghanaian artists for research starting points.
- Consider inviting a local artist to discuss their portfolio approach.
- Emphasise that portfolio development is an ongoing process that will continue beyond the project.
- Encourage documentation throughout the process to capture learning,
- Be prepared to address varying technical skill levels with differentiated support,
- Consider creating buddy systems pairing technically confident learners with those needing support,
- Emphasise cultural context and how Ghanaian artistic identity can be expressed through portfolio organization,

PEDAGOGICAL EXEMPLARS

Talk for Learning: Through questioning and answers, discuss how to organise a digital portfolio.

Collaborative and Experiential Learning: In small groups, analyse the challenges involved in organising a digital portfolio

Key Assessment Level 3: Case Study

Title: Solve the Portfolio Puzzle – A Digital Portfolio Strategy Proposal

Assessment Overview

You are tasked with analysing real-world challenges faced when organising digital portfolios and designing a strategic action plan that solves those challenges for yourself or a hypothetical learner. This task requires you to synthesise knowledge, apply higher-order thinking, and design a real-world solution.

Task Instructions

Part 1: Case Study Analysis (300–400 words)

- Read a provided case study (or reflect on your own experience) describing a poorly organised digital portfolio.
- Identify at least three major challenges from the case.
- Explain how each challenge affects the overall success of the portfolio (viewer experience, purpose, professionalism, etc.).

Part 2: Solution Strategy Proposal (300–500 words)

- Develop a step-by-step strategy for solving the identified problems.

Your proposal should include:

- Content selection plan
- Structure and layout choices
- Visual design decisions
- Tools or platforms to use
- Plan for ongoing updates

Part 3: Visual Layout Sketch (Optional but recommended)

- Create a mock-up or wireframe showing how you would organize the digital portfolio (can be hand-drawn or digital).
- Label each section and describe how it improves navigation and presentation.

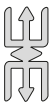
Part 4: Reflection (200 words)

- Reflect on what you learned about organizing digital portfolios.
- Explain how your solution could help others facing similar challenges.

PLC SESSION 22

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app
   a. The key assessment for the week is ***case study***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the case study (NTS 3k-3q).

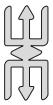
10 minutes	Content Exploration

5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then
   a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).



Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

WEEK 23

Learning Indicator: *In small groups, discuss and report on the benefits of a digital portfolio*

FOCAL AREA: DIGITAL PORTFOLIO IN PERSPECTIVE

BENEFITS OF A DIGITAL PORTFOLIO

A digital portfolio is an online collection of your best work, skills, and achievements. Whether you're an artist, designer, writer, photographer, or student in any creative or academic field, having a digital portfolio helps you showcase your abilities in a modern and professional way.

Below are some of the key benefits of creating and maintaining a digital portfolio:

1. **Showcases Your Skills and Growth**

   A digital portfolio allows you to:

   - Display your best work in one place.
   - Demonstrate your progress over time.
   - Highlight a range of skills—both technical and creative.

   Example: A graphic design student can show early sketches, final designs, and the thinking process behind each project.

2. **Accessible Anytime, Anywhere**

   Unlike a physical folder or sketchbook, a digital portfolio:

   - Can be shared online through a link or email.
   - Works on any device—phone, tablet, or computer.
   - Can be accessed by teachers, colleges, or employers worldwide.

   Example: You can send your portfolio to a university overseas with a single link.

3. **Encourages Reflection and Self-Assessment**

   Building a portfolio makes you:

   - Think about what work to include and why.
   - Evaluate what you've learned from each project.
   - Develop a stronger understanding of your style and strengths.

   Example: Adding descriptions to your work helps you reflect on your process and challenges.

4. **Professional Presentation**

   A well-designed digital portfolio:

   - Helps you make a strong first impression.
   - Shows that you are organized, serious, and career-ready.
   - Gives you an edge in job or college applications.

   Example: An art school applicant with a clean, personalized portfolio may stand out more than someone with only a paper file.

5. **Easy to Update and Maintain**
   - You can add new work anytime.
   - No need to reprint or start from scratch.
   - Great for tracking your creative journey over time.

   Example: After completing a new project, simply upload it with a title and description

6. **Promotes Collaboration and Feedback**

   Digital portfolios can:

   - Be shared with peers and mentors for feedback.
   - Help you connect with a wider audience.
   - Be integrated with social platforms or creative communities.

   Example: Sharing your portfolio on Behance or a class website allows others to view, comment, or recommend your work.

Conclusion

A digital portfolio is more than just a collection of work—it's a personal, professional, and creative tool that helps you communicate who you are, what you've done, and what you're capable of. Whether for school, university, or career opportunities, building a digital portfolio now prepares you for future success.

Learning Tasks

Refer to week 2 of Extended Project for Week 22-24: Digital Portfolio Development and Analysis

Title: "Digital Portfolio Mastery: From Challenges to Professional Practice"
Duration: 6 Hours (*spread across weeks 22-24, 2 hours per week)*
Project Overview

Learners will identify and analyse challenges in digital portfolio organisation, explore the benefits of digital portfolios, research contemporary Ghanaian artists' portfolio practices, and develop their own strategically organised digital portfolios.

PEDAGOGICAL EXEMPLARS

Communication and Self-Directed Learning: Discuss the benefits of a digital portfolio.

Self-Directed Learning: Present a report on the benefits of a digital portfolio.

KEY ASSESSMENT

Level 3: Multiple Choice Questions

1. Which benefit of a digital portfolio directly addresses the challenge of reaching international audiences?

A. Reduced physical storage requirements.

B. Global accessibility regardless of location.

C. Decreased production costs for printing.

D. Elimination of physical wear and tear.

2. An artist who frequently updates their work benefits from a digital portfolio because:

A. it allows immediate revision without reprinting.

B. it provides automatic backup of previous work.

C. it reduces the need for professional photography.

D. it eliminates the need for artist statements.

3. Which scenario demonstrates a strategic advantage of digital portfolios for emerging artists?

A. Creating multiple portfolios tailored to different galleries.

B. Avoiding the cost of producing physical exhibition catalogues.

C. Maintaining consistent image quality across all devices.

D. Reducing the need for professional networking events.

4. When analysing engagement metrics, which benefit of digital portfolios provides valuable insight for artistic development?

A. Monitoring how many people download portfolio files.

B. Counting total number of portfolio views per month.

C. Tracking which artworks receive increased attention.

D. Measuring average time spent viewing the portfolio.

5. Which benefit of digital portfolios addresses the SDG goal of reducing environmental impact?

A. Reduced need for travel to present work to clients.

B. Elimination of physical materials for portfolio creation.

C. Lower energy consumption compared to gallery lighting.

D. Decreased water usage in the production process.

6. In what way does a digital portfolio enhance collaboration between artists?

A. By providing templates for standardised presentations.

B. By enabling real-time sharing of works-in-progress.

C. By automatically translating artist statements.

D. By creating uniform pricing structures for artworks.

7. Which benefit of digital portfolios supports critical evaluation of an artist's style evolution?

A. The ability to create chronological archives of all work.

B. The option to display works according to medium used.

C. The potential to add background music to presentations.

D. The capacity to embed video tutorials with each piece.

8. How does a digital portfolio support contemporary Ghanaian artists in preserving cultural heritage?

A. By automatically translating descriptions into local languages.

B. By requiring less physical space in cultural institutions.

C. By documenting traditional techniques with multimedia elements.

D. By reducing the cost of international shipping for exhibitions.

9. Which strategic benefit of digital portfolios addresses the challenge of presenting three-dimensional artworks?

A. The option to add textual descriptions of tactile elements.

B. The potential to list precise measurements of each piece.

C. The capacity to compare works side by side on one screen.

D. The ability to include multiple angles and 360-degree views.

10. When evaluating long-term career impact, which benefit of digital portfolios offers a significant advantage?

A. The reduced need for formal gallery representation.

B. The ability to track and analyse audience engagement patterns.

C. The elimination of transportation costs for physical works.

D. The potential to earn passive income through online sales.

PLC SESSION 23

45 minutes	Planning & Reviewing the Learning Plan

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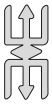
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4. Plan the week's key assessment with your app

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10 minutes	Content Exploration

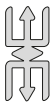
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WEEK 24

Learning Indicator: *Using group discussion, identify some contemporary Ghanaian artists who depend largely on portfolio building in their artistic practice*

FOCAL AREA: CONTEMPORARY GHANAIAN ARTISTS AND THEIR PORTFOLIO-DRIVEN PRACTICES

Introduction

Ghana has emerged as a vibrant centre of contemporary African art, with numerous artists gaining international recognition through their strategic use of digital and physical portfolios. These artists have leveraged well-curated portfolios to document their work, secure exhibitions, and connect with global audiences. Here are several notable contemporary Ghanaian artists whose careers demonstrate the importance of portfolio building:

Elkanah Kwadwo Mpesum (El Carna)

Elkanah Kwadwo Mpesum, known professionally as El Carna, is a Ghanaian illustrator and digital artist. El Carna's work represents a form of image-making in which drawing, digital illustration, storytelling, popular culture and professional visual communication converge. His work ranges from painterly digital illustration and character development to fashion narratives, music-related imagery and commissioned cover art. His practice is therefore not confined to individual images; images circulate through social media, music, publishing, branding and other digital platforms. For such a practitioner, the digital portfolio can operate simultaneously as an archive of images, a demonstration of technical ability, a record of creative process, a narrative space, a professional interface and a means of connecting artistic production with wider popular and commercial cultures.

El Carna's Practice and Digital Portfolio

1. **The Portfolio as a Visual Catalogue**: His substantial body of illustration requires a platform that organises numerous images into coherent bodies of work rather than presenting them as isolated pictures.
2. **The Portfolio as a Process Archive**: Digital documentation can reveal the movement from sketch to developed illustration, as demonstrated by the documented making of the Messiah cover artwork.
3. **The Portfolio as a Narrative Space**: Character-based projects such as Aku & Molly are not simply collections of images; they construct fictional identities, personalities, fashion and stories. A digital portfolio can preserve these relationships.

4. **The Portfolio as a Demonstration of Digital Skill**: Because digital illustration involves distinctive techniques of drawing, rendering, layering, colour, texture and composition, the portfolio can demonstrate how he works, not merely what he produces.
5. **The Portfolio as a Cultural Archive**: His illustrations engage Ghanaian identities, fashion, music and popular culture. A digital portfolio can bring these images together as a record of contemporary visual culture.
6. **The Portfolio as a Platform for Collaboration**: Music, publishing, fashion and other creative industries require illustrators to work with different clients and creative practitioners. The portfolio can make previous collaborations visible and establish a basis for future ones.
7. **The Portfolio as a Commissioning Interface:** For a commercially active illustrator, the portfolio is also a professional tool. A prospective client should be able to see the range, quality, style and applications of the artist's work and understand what kinds of commissions the artist can undertake.
8. **The Portfolio as a Circulation Network:** El Carna's images are made for a culture in which artworks can move rapidly between Instagram, music platforms, publications, websites, merchandise and other digital spaces. The portfolio can connect these otherwise dispersed appearances into a coherent professional identity.
9. **The Portfolio as a Bridge between Art and Popular Culture**: His work demonstrates how illustration can move between fine-art sensibilities and popular visual culture. The portfolio can place personal illustrations, character development, editorial work, music artwork and other commissions within the broader trajectory of the practice.
10. **The Portfolio as an Extension of the Artist's Brand**: For an illustrator whose images are themselves highly recognisable and reproducible, the digital portfolio becomes part of professional identity. It does not simply communicates ownership, but narratives of capabilities, capacity and domain

Akwasi Bediako Afrane

Akwasi Bediako Afrane, also known as Makoff, is a Ghanaian Artist who lives and works from Kumasi. His practice is situated between sculpture, discarded electronic technologies, digital modelling, animation, virtual and augmented reality, gaming, audience participation and material experimentation. His TRONS, for instance, can move from discarded technological components into physical sculptures and then into digital and immersive environments. This hybridity makes the conventional portfolio, which primarily documents completed artworks through photographs and text, insufficient. For a practice that straddles physical, digital, material and participatory states, the digital portfolio becomes not merely a record of the work, but an extension of the practice itself, reproducing its logic of

transformation, hybridity, connectivity, experimentation and interaction. The reason for the use of digital portfolio are similar to most artists, especially those with practices that defy conventional print photography.

Reasons why digital portfolios are crucial for his practice

1. **Document transformation**: His practice involves transforming discarded technological objects into new physical and conceptual forms. A digital portfolio can reveal this transformation from material source to finished work.
2. **Preserve process**: Sketches, experiments, dismantling, fabrication, prototypes and failures are significant to his practice. Digital portfolios can preserve these otherwise transient stages.
3. **Represent time-based works**: Qualities like movement, animation and video cannot be adequately communicated through still photographs. Digital portfolios retain the temporal dimension of such works.
4. **Accommodate virtual works**: Where physical objects become 3D models, Virtual Reality, Augmented Reality or digital environments, the portfolio can provide access to forms of the work that cannot be adequately represented in a conventional printed portfolio.
5. **Connect physical and digital realities**: His practice crosses between physical sculpture and digital environments. A digital portfolio can demonstrate these transitions rather than treating them as separate practices.
6. **Reveal material histories**: Discarded electronic components carry histories of production, consumption, obsolescence and disposal. Digital documentation can contextualise these materials and their subsequent transformation.
7. **Document participation and collaboration**: Projects such as TRONSFORMATION involve participants, technicians, students and other collaborators. A digital portfolio can preserve these relationships as part of the artwork's history rather than presenting only the final objects.
8. **Create experiential encounters**: Interactive media, 360-degree documentation, animation and immersive technologies can allow audiences to experience aspects of the practice rather than merely look at representations of it.
9. **Functions as a research archive**: His practice generates knowledge through materials, technologies, experimentation and social encounters. The portfolio can bring together artworks, research, references, processes and reflections as an evolving archive.
10. **Extends the practice beyond the physical exhibition**: Most importantly, the digital portfolio can become another site of artistic engagement. Rather than simply saying “these are my works,” it can demonstrate how the works, technologies, materials, people and ideas connect and continue to evolve.

Amoako Boafo

Amoako Boafo has achieved remarkable international success with his distinctive finger-painted portraits celebrating Black identity. His portfolio approach is notable for:

- Consistent, high-quality documentation that highlights his unique painting technique
- Strategic curation showing thematic development while maintaining visual coherence
- Digital portfolio sharing that facilitated his discovery by international galleries
- Documentation that emphasizes the textural qualities of his finger-painting technique
- Boafo's well-developed portfolio helped facilitate his rapid rise in the international art market, including collaborations with Dior and record-breaking sales at major auction houses.

Serge Attukwei Clottey

Serge Attukwei Clottey is known for his "Afrogallonism" project, transforming yellow plastic jerry cans into tapestry-like installations that address environmental issues and migration. His portfolio strategy includes:

- Documentation of both his performance work and physical installations
- Process-oriented documentation showing community involvement
- Portfolio materials that connect his artistic practice to environmental activism
- Cross-platform portfolio presence linking gallery work with public interventions
- His comprehensive portfolio approach has helped him secure exhibitions at institutions like The Mistake Room in Los Angeles and Gallery 1957 in Accra.

Zohra Opoku

Zohra Opoku explores textile traditions, portraiture, and cultural identity through photography, screen printing, and installation. Her portfolio development is characterized by:

- Thematic organization that highlights her exploration of textile traditions
- Documentation showing how her work functions in both gallery and public contexts
- Process documentation revealing her unique combination of photography and textile techniques
- Portfolio materials that articulate the conceptual frameworks behind her visual practice
- Her thoughtful portfolio approach has facilitated her participation in exhibitions at the Centre for Contemporary Art in Lagos, Gallery 1957 in Accra, and residencies worldwide.

Bright Ackwerh

Bright Ackwerh has gained recognition for his satirical illustrations and paintings that comment on political and social issues in Ghana and beyond. His portfolio practice includes:

- Digital portfolio platforms that align with his pop culture-influenced aesthetic
- Strategic use of social media as an extension of his formal portfolio
- Documentation showing the application of his illustrative style across different media
- Portfolio organization that balances commercial work with personal artistic projects
- His digital-first portfolio approach has helped him connect with international audiences and secure collaborations with brands and publications.

Tracy Naa Koshie Thompson

Tracy Naa Koshie Thompson's practice operates through processes of transformation across scales, materials and modes of representation. She takes seemingly ordinary materials, and foods such as indomine, kanzo and jollof rice, subjects them to microscopy and reverse engineering, and translates their microscopic structures into digital topographies, animations, cartographic forms and 3D-printed objects. Her practice does not exist solely in the finished physical artwork; it extends through research, experimentation, microscopic observation, digital modelling, animation, mapping, installation and exhibition-making. Her curatorial practice similarly operates through research, collaboration, spatial adaptation and network-building. For a practice of this kind, a digital portfolio is therefore not simply a place to display artworks. It functions as a research archive, process laboratory, visualisation system, exhibition record and curatorial interface.

Thompson's Practice Needs Digital Portfolios

1. **Reveal processes that cannot be seen in the finished wor**k: Much of Thompson's practice depends upon processes of modification, microscopy, reverse engineering and digital modelling. A finished print or installation conceals much of this journey. A digital portfolio makes the transformation visible.
2. **Move between scales**: Her work moves from the everyday scale of food to the microscopic scale of microbial and crystalline structures, and then back into human-scale installations and landscapes. Digital portfolios connect these different scales through images, animation, video, models and interactive representations.
3. **Make the invisible visible**: Microscopy reveals structures that cannot ordinarily be perceived by the naked eye. Her digital reconstructions subsequently transform those

observations into topographies and landscapes. The portfolio can therefore perform a crucial role in revealing otherwise invisible worlds.

4. **Demonstrate translation across media**: A single investigation can move from food - microscopy - digital image - elevation model - 3D form - print - animation - installation. Her portfolio can document these translations rather than treating each resulting artwork as an isolated object.
5. **Preserve experimentation and iteration:** Thompson's practice is explicitly experimental and process-based. Her documented projects include process images and successive digital operations leading to the final works. A digital portfolio can retain these iterations, including experiments that may never enter an exhibition.
6. **Connect scientific and artistic modes of seeing:** Microscopy, digital elevation modelling, cartography and remote-sensing techniques enter her artistic practice without simply becoming scientific illustration. A digital portfolio can show how scientific technologies are appropriated, transformed and reinterpreted artistically.
7. **Accommodate works that exist simultaneously in different forms:** Her practice can produce prints, 3D objects, installations, videos, animations, maps and virtual environments from related investigations. A digital portfolio can hold these different manifestations together as one evolving body of inquiry rather than a series of unrelated works.
8. **Document the exhibition as part of the artwork**: Thompson's work is frequently site-specific and process-based. Consequently, where something is exhibited and how it occupies a particular environment can matter. Digital documentation can preserve spatial relationships, installation decisions and changing exhibition contexts after the physical exhibition has disappeared.
9. **Extends curatorial practice**: Her role as an artist-curator introduces another dimension. Her curatorial projects include exhibitions across different cities and countries, while Compound House operates as a nomadic, networked platform that adapts exhibition-making to artists and sites. A digital portfolio can therefore become a curatorial archive, documenting artists, exhibitions, collaborations, research and spatial interventions.
10. **Constructs relationships rather than simply present works**: Perhaps most significantly, Thompson's practice is about relationships: food and geology, microscopic and planetary scales, human and non-human agency, material and digital form, artist and site, artist and curator, exhibition and community. Her digital portfolio can reproduce these relationships through links, sequences, layered media, process documentation and cross-referencing.

Fatric Bewong

Fatric Bewong creates colorful paintings and installations exploring Ghanaian cultural symbols and contemporary social issues. Her portfolio development includes:

- Documentation showing the progression of her distinctive visual language
- Process-oriented materials revealing her unique techniques
- Portfolio organization that highlights both her painting and installation work
- Presentation that connects her work to broader cultural contexts
- Her portfolio approach has helped her participate in exhibitions across Ghana and internationally.

Bernard Akoi-Jackson

Bernard Akoi-Jackson works across performance, installation, and video, creating interventions that question social norms and institutional structures. His portfolio strategy includes:

- Video documentation of ephemeral performances
- Multi-perspective documentation of installation works
- Portfolio materials that articulate the conceptual frameworks of his practice
- Documentation showing audience interaction with his participatory works
- His comprehensive documentation approach has facilitated his participation in events like the Dak'Art Biennale and exhibitions at the Nubuke Foundation.

Conclusion

These contemporary Ghanaian artists demonstrate how strategic portfolio development has become integral to artistic practice in the global art world. Their approaches show that portfolios are not merely passive documentation but active tools for:

- Preserving ephemeral or site-specific works
- Communicating conceptual frameworks
- Demonstrating technical processes
- Connecting local contexts with global conversations
- Facilitating international opportunities and recognition

For these artists, portfolio building is not an afterthought but a fundamental aspect of their artistic practice, enabling their work to transcend geographic boundaries and enter into dialogue with the broader contemporary art world.

The success of these artists underscores the importance of teaching comprehensive portfolio development skills in art education, preparing the next generation of Ghanaian artists to effectively share their work with global audiences.

Learning Tasks

Refer to Week 3 of Extended Project for Week 22-24: Digital Portfolio Development and Analysis

Title: "Digital Portfolio Mastery: From Challenges to Professional Practice"

Duration: 6 Hours (*spread across weeks 22-24, 2 hours per week)*

Project Overview

Learners will identify and analyse challenges in digital portfolio organisation, explore the benefits of digital portfolios, research contemporary Ghanaian artists' portfolio practices, and develop their own strategically organised digital portfolios.

PEDAGOGICAL EXEMPLARS

Collaborative Learning: Through group discussions, identify some contemporary Ghanaian artists who depend largely on portfolio building in their artistic practice.

Project-Based Learning; Collaborative Learning: Through group work, produce a digital portfolio that addresses one of the goals of SDG.

KEY ASSESSMENT

Level 4: Research

Artist Research & Comparison (Written/Oral/Video Report – 400–500 words)

Choose two contemporary Ghanaian artists (e.g., Ibrahim Mahama, El Anatsui, Zohra Opoku, Serge Attukwei Clottey).

Research and explain:

- How each artist uses portfolios (digital or physical)
- The purpose and audience of their portfolios
- How portfolio building has impacted their artistic careers
- Compare their portfolio strategies and reflect on what makes them effective or unique.

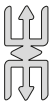
Criteria: Learner investigates two contemporary Ghanaian artists, explains their use of portfolios, and provides a thoughtful comparison of strategies, purposes, and impacts.

Total: 10 marks

PLC SESSION 24

45 minutes	Planning & Reviewing the Learning Plan

1. Begin the session by recapping lessons from the previous year/session/week, focusing on how learning was applied.
2. Use your subject specific app to explore the content before planning. Ask the app to
   a. explain the week's concepts in a practical way that will make it easier for learners to understand
   b. identify two or three common misconceptions learners may have on the week's content and how to address them using contexts familiar to Ghanaian learners. (NTS 3a, 3g and 3m).
3. Use your subject specific app to plan your lesson. Ask the app to
   a. suggest the most effective method for teaching the week's concepts to learners with diverse backgrounds.
   b. suggest learning activities, differentiation and essential questions based on the method of teaching (NTS 3a-3q)
   c. review your prepared learning plan and address any challenging issues you may have identified in your subject area (NTS 3a-3c).



Note

- *Take note of the recap topics linked to Years 1 and 2 while preparing for your lesson.*
- *Refer to the Values Learning Community Handbook and link the values for the week in your lesson to ensure that learners are applying what they learn.*

4. Plan the week's key assessment with your app
   a. The key assessment for the week is ***Research***. Chat with your app to plan this assessment, indicating what you and your learners will do before, during and after the research (NTS 3k-3q).

10 minutes	Content Exploration

5. As a subject group, select one problem or idea/term in the week's content that is challenging (not a routine procedural question, but one that requires conceptual understanding) and then
   a. use the app, ask it to solve the problem step by step and explain the reasoning behind each step (you may be assisted by a teacher who is strong in the content area)

b. all teachers in the group work through a similar problem individually for 3–4 minutes

c. the group then works through the problem together step by step

d. highlight the most common errors made at each step and discuss (NTS 1c, 1e, 2c, 2e, 3e-3j).

Note

- This part is not just about 'How do I teach this?' but how do I teach it for learners to understand?
- If the group still shares the same content gap, use the app: ask it to solve the problem step by step and explain the reasoning behind each step.
- Problems/ideas discussed should be sourced from the Teacher Manual content, not invented separately. This keeps the content exploration directly connected to what teachers will deliver.

30 minutes	Enactment

6. Enact a teaching activity based on your learning plan (NTS la-1b, 1e-lg, 2c, 2e, 2f, 3c-3j and 3o).

a. Colleagues observe with specific attention to clarity of concept explanation, use of familiar Ghanaian examples and how misconceptions are handled if they arise.

b. After the enactment, ask for structured feedback from the group

i. was the concept explained in a way that a learner with no prior knowledge could follow?

ii. were the examples grounded in contexts familiar to Ghanaian learners?

iii. did any misconceptions surface and if so, how were they addressed?

5 minutes	Reflection

7. Reflect and share your views on the session. One thing that worked well, what did not work well and what you will do differently. (NTS 1a, 1b).

8. Identify a critical friend to observe and provide feedback on your lesson in relation to the PLC Session conducted (NTS 1f, 1g).

9. Remember to

a. transfer your chats into your learning planner template.

b. read your Teacher Manual and related Learner Material in preparation for the next session. Take note of the recap weeks, which are linked to Years 1 and 2 (NTS 3a).

c. integrate National Values, GESI, SEL, and 21st century skills into your learning activities, assessment tasks, and rubrics/mark schemes.

Section 7 Review

This section explored the multifaceted aspects of digital portfolio development, progressing from challenge identification to professional applications. Learners analysed technical and conceptual challenges in portfolio creation, including file management, platform selection and accessibility considerations. Through collaborative learning, they identified how digital portfolios serve multiple functions in contemporary art practice—from documentation to professional networking.

The exploration of Ghanaian artists who utilise portfolios effectively provided valuable cultural context, connecting theoretical understanding with authentic local practice. This cultural relevance enhanced student engagement while demonstrating how portfolio development transcends geographic boundaries.

Through varied pedagogical approaches including talk for learning, collaborative exploration and project-based activities, students developed comprehensive understanding of digital portfolio development while building practical skills. The culminating SDG-focused portfolio project integrated technical competence with social awareness, reinforcing the role of art in addressing global challenges.

Assessment strategies balanced technical skill evaluation with critical thinking assessment, providing multiple opportunities for students to demonstrate both strategic reasoning and extended critical thinking capabilities. This comprehensive approach ensured students developed both theoretical understanding and practical competence in portfolio development—essential skills for contemporary artistic practice.

APPENDIX: MARKING SCHEMES FOR THE KEY ASSESSMENTS

WEEK 22

Grading Rubric (Total: 40 marks)

Criteria	Excellent (10)	Very good (8–9)	Satisfactory (6–7)	Needs Improvement (1–5)
Challenge Analysis	Thorough, insightful identification and analysis of 3+ key challenges with real-world relevance.	Clear analysis of 2–3 valid challenges with reasonable explanations.	Basic understanding of challenges; some explanations may lack clarity.	Few or unclear challenges; limited or inaccurate analysis.
Solution Strategy	Creative, detailed, and practical solution addressing all major challenges.	Good, practical strategy with mostly effective solutions.	Strategy addresses some challenges but lacks depth or coherence.	Strategy is vague, unrealistic, or misses key problems.
Visual Layout Sketch	Clear, well-labelled layout that directly supports the strategy and enhances understanding.	Mostly clear layout with some helpful labels.	Basic layout included but lacks detail or clarity.	Sketch missing, unclear, or unrelated to the strategy.
Reflection	Deep, thoughtful reflection showing strong personal insight and general application.	Clear reflection showing learning and personal relevance.	Basic reflection; general understanding of the topic.	Superficial or missing reflection; little understanding shown.

Grade:

A (36–40) – Excellent understanding and solution

B (31–35) – Very Good understanding with minor gaps

C (26–30) – Satisfactory with some basic insight

D (20–25) – Limited grasp; major improvement needed

F (<20) – Incomplete or unclear

WEEK 23

1. B

2. A

3. A

4. C

5. B

6. B

7. A

8. C

9. D

10. B

WEEK 24

Criteria	Excellent (8–10)	Very Good (6–7)	Satisfactory (4–5)	Needs Improvement (1–3)
Accuracy of Research	Thorough and accurate information about both artists; includes specific portfolio examples and references.	Mostly accurate and relevant information; some detail on portfolio use.	Basic information with limited detail; may contain minor inaccuracies.	Incomplete or inaccurate research; limited or no reference to portfolio practices.
Depth of Analysis	Insightful analysis of each artist's approach; clearly explains how portfolios support artistic growth and exposure.	Some analysis; shows understanding of how portfolios are used.	General observations; lacks in-depth thinking.	Minimal or no analysis; mostly descriptive or vague.
Comparison of Portfolio Strategies	Strong, meaningful comparison that highlights key similarities and differences with justification.	Clear comparison with some insight into differences and effectiveness.	Basic comparison; ideas not fully developed.	No real comparison or unclear differences.
Organization & Clarity	Well-structured, coherent, and clearly written; free of major grammar or spelling issues.	Mostly well-organized and understandable; few language errors.	Understandable but may lack clear structure; some grammar issues.	Poorly organized or hard to follow; frequent language or grammar issues.

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