Printing Techniques

Content Area: **Fine Arts**
Course(s):
Time Period: **Marking Period 1**
Length: **5 Weeks**
Status: **Published**

Brief Summary of Unit

This course explores the fundamental theories and practices of visual communication within the disciplines of graphic design, advertising design, and illustration. Students develop conceptual, technical, and critical-thinking skills through a series of design projects and critiques that emphasize effective visual problem-solving and communication. Instruction includes hands-on experience with a variety of printing and production processes, including inkjet printing, screen printing, vinyl graphics production, engraving, and related fabrication technologies.

Revised: August 2026

Essential Questions/Enduring Understandings

Essential Questions:

- Why do traditional printing methods such as woodblock printing, metal plate engraving, lithography, and offset printing continue to be used despite the widespread availability of digital and laser printing technologies?
- Why is it important for graphic designers and printing professionals to understand the characteristics, advantages, and limitations of various printing processes?
- Why is maintaining a clean, organized, and safe work environment essential in both traditional and digital printing production settings?
- What visual characteristics or production artifacts can help identify the specific printing method used to create a printed piece?
- Why do digital design applications offer multiple file format options, and how do these formats serve different purposes in the design and production workflow?
- Why is it important to understand file compatibility when working with different software applications, devices, and production systems?
- What are the differences between scanning an image and importing a digital image into a design project, and when is each method appropriate?
- At what stage of the design and production process should file size and file format be modified, and what factors should influence these decisions?
- What output and finishing options are available for digital design projects, including digital distribution, web publishing, inkjet printing, thermal printing, laser printing, and archival storage?
- Which file formats are most commonly used for professional digital output and print production, and what are their advantages?
- Which file formats are most appropriate for screen-based and web graphics, and why?
- Why is image correction and retouching often necessary after scanning artwork or photographs, and what common issues must be addressed before final output?

Enduring Understandings:

- Printing technologies continue to evolve, but traditional and contemporary printing methods each serve unique artistic, commercial, and production purposes.
- Knowledge of printing processes enables designers and production professionals to make informed decisions that affect quality, efficiency, cost, and visual impact.
- Professional work habits, including organization, cleanliness, and attention to detail, are essential for safe and effective production environments.
- Different printing methods leave identifiable visual characteristics that can be used to evaluate quality and determine production techniques.
- File formats are designed for specific purposes, and selecting the appropriate format is critical to successful design, production, and distribution.
- Understanding file compatibility ensures that digital assets can be accurately shared, edited, reproduced, and output across multiple platforms and technologies.
- Digital images can be acquired through various methods, including scanning and importing, each with distinct advantages and applications.
- Effective file management, including proper sizing and formatting, is essential to maintaining image quality and workflow efficiency.
- Designers must understand the strengths and limitations of different output methods to produce work that meets intended communication and production goals.
- Print and digital media require different file specifications, formats, and optimization strategies to achieve the best results.
- Image correction and retouching are important steps in preparing scanned or captured images for professional-quality reproduction.
- Successful visual communication depends on understanding the relationship between design, technology, production processes, and final output.

Objectives

Students Will Know:

- Students will know the historical development and evolution of major printing processes and their impact on visual communication, commerce, and society.
- Students will know the importance of understanding a variety of printing methods and how this knowledge supports effective decision-making for graphic designers and printing technicians.
- Students will know how to create and produce screen, heat press, and digital prints using appropriate tools, materials, and techniques.
- Students will know the importance of maintaining organized materials, equipment, and clean workspaces to ensure safety, efficiency, and quality production outcomes.
- Students will know how to identify the distinguishing visual characteristics and production traits associated with various printing processes.
- Students will know the appropriate file formats and specifications required to prepare artwork, photographs, and documents for professional print and digital output.
- Students will know that different printing techniques produce unique visual qualities and aesthetic effects that influence the appearance and communication of a design.
- Students will know the purpose and application of various digital file types and how to select

the appropriate format for specific design and production needs.
    - Students will know that proper maintenance of printing equipment and a clean production environment are essential components of professional printing practices.
    - Students will know the role of diverse printing techniques in communication, industry, art, and culture, and understand their continued importance in contemporary society.

Students Will Be Skilled At:

- Students will be skilled at stretching, degreasing, coating, and preparing screens for screen-printing applications using industry-standard procedures.
- Students will be skilled at accurately transferring designs and imagery to a variety of printing surfaces, including blocks, screens, plates, and digital media.
- Students will be skilled at safely and effectively using the tools, equipment, and materials associated with , screen-printing, heat press, and digital printing processes.
- Students will be skilled at maintaining printing equipment, organizing materials, and sustaining a clean, safe, and efficient studio or shop environment.
- Students will be skilled at identifying, selecting, and applying appropriate inks based on the printing process, substrate, and desired visual outcome.
- Students will be skilled at analyzing, evaluating, and collecting printed samples to understand production techniques, printing characteristics, and design effectiveness.
- Students will be skilled at completing print production projects and assignments that demonstrate technical proficiency, craftsmanship, and creative problem-solving.
- Students will be skilled at applying industry-standard workflow practices to produce professional-quality printed and digital design work.

Learning Plan

1. Teacher-led presentations introducing the major printing processes to be studied, including relief, intaglio, lithography, screen printing, offset printing, and digital printing.
2. Class discussions and collaborative learning activities focused on the historical development, applications, and production procedures associated with each printing method.
3. Hands-on demonstrations of printing tools, equipment, and materials, including proper usage, maintenance, and cleaning procedures to promote safe and effective studio practices.
4. A series of printmaking projects utilizing various printing methods, including screen printing, relief printing, intaglio, lithography, offset printing, and digital printing.

a. Use of Smart Board technology to illustrate production processes, workflows, and technical procedures

associated with each printing method.

b. Internet-based research activities to investigate printing technologies, historical developments, and contemporary industry applications.

c. Use of industry-standard software applications, including Adobe Illustrator, Adobe Photoshop, and related design programs, to create original artwork and production-ready files.

d. Preparation and exposure of plates for offset printing applications.

1. Student-led critiques and self-assessments utilizing teacher-developed rubrics to evaluate technical proficiency, craftsmanship, and design effectiveness.
2. Written reports analyzing the printing processes studied, including production steps, tools and materials used, and practical applications within the graphic communications industry.
3. Assessment of written reports using established grading rubrics.

Additional Learning Activities:

1. Teacher-led instruction on image scanning, importing procedures, and digital asset management.
2. Student exploration and class discussions examining various digital file formats, their properties, and their applications in graphic design and print production.
3. Instruction and guided practice in scanning artwork and photographic images.
4. Instruction and guided practice in importing digital artwork and photographic images into design applications.
5. Project-based learning activities focused on the scanning, importing, and preparation of digital images for print and screen-based output.
6. Lessons addressing the preparation and optimization of electronic files for professional production and distribution.
7. Project-based activities involving the creation and evaluation of on-screen graphics and digital media. Each lesson will incorporate career connections and culminate in a student presentation, teacher assessment, and student self-assessment using a rubric.
8. Class discussions examining the various methods and technologies available for digital and print output.
9. A series of lessons focused on output options and production methods, including web publishing, laser printing, inkjet printing, and other industry-standard output technologies.
10. Prepare all work for portfolio development.

(Each lesson includes career exploration components and technology-based activities utilizing resources such as Smart Board technology, the Internet, and professional design software. Student performance will be assessed by the teacher and through self-assessment using established rubrics.)

1. Unit assessment evaluating student understanding of printing processes, digital workflows, file preparation, and production methods.

Assessment

Formative

answer essential questions

exit ticket

meaningfully participate in guided question and answer sessions, group and individual discussions, and show an understanding of the purpose of the unit lesson(s), and their key terms and concepts.

Summative

Design and create

Benchmark

Midterm Exam/Final Exam

Alternative Assessment

Present the project to peers and/or the community.

Complete writing prompt: (example)

Compare and contrast the visual characteristics, advantages, and limitations of one traditional printing method (such as metal plate engraving) and one modern digital output method.

Materials

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    - Online design examples, tutorials, and step-by-step instructional guides demonstrating the use of Adobe Illustrator tools, design techniques, and professional graphic design practices.
    - Teacher-created demonstrations and instructional presentations modeling design concepts, software techniques, creative problem-solving, and project expectations.
    - Former student examples showcasing successful projects, logo designs, layouts, and applications of the elements and principles of design to provide students with reference points and inspiration.
    - Professional graphic design samples from advertisements, logos, branding materials, websites, posters, packaging, and digital media used for analysis and discussion.
    - Printed and digital handouts covering Adobe Illustrator tools, keyboard shortcuts, vocabulary, design terminology, project guidelines, and design process strategies.
    - Class notes and guided lecture materials related to the elements and principles of design, typography, color theory, composition, branding, and visual communication.
    - Instructional reference sheets and design process organizers to support brainstorming,

sketching, concept development, and project planning.
- Assessment rubrics outlining project expectations, grading criteria, technical skills, creativity, craftsmanship, and participation requirements.
- Critique guides and peer review worksheets to support constructive feedback, reflection, and discussion during the design process.
- Adobe Illustrator software for creating digital illustrations, logos, compositions, and design projects.
- Computers or laptops capable of running Adobe Illustrator and supporting digital design work.
- Digital projector or interactive display for teacher demonstrations, presentations, and group critiques.
- Sketchbooks, drawing paper, or brainstorming worksheets for thumbnail sketches, concept development, and planning activities.

Standards

Information Literacy

This unit challenges students to locate, evaluate, and use information effectively. Information literacy includes, but is not limited to, digital, visual, media, textual, and technological literacy. Lessons may include the research process and how information is created and produced; critical thinking and using information resources; research methods, including the difference between primary and secondary sources; the difference between facts, points of view, and opinions, accessing peer-reviewed print and digital library resources; the economic, legal, social, and ethical issues surrounding the use of information.

ELD standards:https://docs.google.com/document/d/1wdmsiGOdCHlrjU-WPvAtENnEgi0EStZXo0uiFYv1Nu4/edit

1.5.12acc.Cr1a	Individually and collaboratively formulate new creative problems based on student's existing artwork.
1.5.12acc.Cr1b	Choose from a range of materials and methods of traditional and contemporary artistic practices to plan works of art and design.
1.5.12acc.Cr2a	Through experimentation, practice and persistence, demonstrate acquisition of skills and knowledge in a chosen art form.
1.5.12acc.Cr2b	Demonstrate awareness of ethical implications of making and distributing creative work.
1.5.12acc.Cr2c	Redesign an object, system, place, or design in response to contemporary issues.
1.5.12acc.Cr3a	Engage in constructive critique with peers, then reflect on, re-engage, revise, and refine works of art and design in response to personal artistic vision.
TECH.K-12.1.4	Innovative Designer Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.
TECH.K-12.1.4.a	know and use a deliberate design process for generating ideas, testing theories, creating

	innovative artifacts or solving authentic problems.
TECH.K-12.1.4.b	select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.
TECH.K-12.1.4.c	develop, test and refine prototypes as part of a cyclical design process.
1.5.12acc.Pr4a	Analyze, select and critique personal artwork for a collection or portfolio presentation.
1.5.12acc.Re7a	Recognize and describe personal aesthetic and empathetic responses to the natural world and constructed environments.
1.5.12acc.Re7b	Evaluate the effectiveness of visual artworks to influence ideas, feelings, and behaviors of specific audiences.
1.5.12acc.Re8a	Identify types of contextual information useful in the process of constructing interpretations of an artwork or collection of works.
1.5.12acc.Re9a	Determine the relevance of criteria used by others to evaluate a work of art or collection of works.
1.5.12acc.Cn10a	Utilize inquiry methods of observation, research and experimentation to explore other subjects through artmaking.
I	Inquire: Build new knowledge by inquiring, thinking critically, identifying problems, and developing strategies for solving problems.
I.A.2	Recalling prior and background knowledge as context for new meaning.
I.B.1	Using evidence to investigate questions.
I.B.2	Devising and implementing a plan to fill knowledge gaps.
V	Explore: Discover and innovate in a growth mindset developed through experience and reflection.
IV.B	Learners gather information appropriate to the task by:
IV.C	Learners exchange information resources within and beyond their learning community by:
III	Collaborate: Work effectively with others to broaden perspectives and work toward common goals.

Integrated Accommodation and Modifications, Special Education students, English Language Learners, At-Risk Students, Gifted and Talented students, Career Education, and those with 504s

Instructional Accommodations

- Provide step-by-step written and visual instructions for all design projects and software demonstrations.
- Break larger assignments into smaller, manageable tasks with interim deadlines and check-ins.
- Use modeling and teacher demonstrations before independent student work.
- Provide guided notes, vocabulary lists, and graphic organizers for lectures and presentations.
- Offer repeated directions and clarify expectations verbally and visually.
- Pre-teach key vocabulary related to graphic design, Adobe Illustrator tools, and design principles.
- Allow students to access recorded demonstrations or tutorial videos for review at their own pace.
- Provide exemplars and sample projects to reinforce expectations and concepts.
- Use frequent comprehension checks during instruction and demonstrations.
- Provide one-on-one or small-group instructional support when needed.

Assignment and Assessment Modifications

- Allow extended time for quizzes, projects, and class assignments.
- Reduce the number of required design variations or sketches without compromising learning objectives.
- Modify project complexity based on student ability levels while maintaining core standards.
- Allow oral explanations or presentations in place of written reflections when appropriate.
- Provide alternative assessments such as guided critiques, interviews, or portfolio conferences.
- Use simplified rubrics with clearly defined criteria and visual supports.
- Permit revisions and resubmissions after feedback and teacher conferencing.
- Grade based on individual growth, effort, and mastery of essential skills when appropriate.

Technology and Software Supports

- Provide access to assistive technology tools, including text-to-speech and speech-to-text software.
- Allow use of adaptive computer equipment, alternative mice, keyboards, or styluses if needed.
- Create keyboard shortcut reference sheets and simplified tool guides for Adobe Illustrator.
- Provide templates, partially completed files, or scaffolded starter documents.
- Allow students to zoom in on workspaces or use accessibility settings within software programs.
- Offer digital copies of handouts and notes for organization and accessibility.

Classroom Environment Accommodations

- Preferential seating near instruction or teacher demonstrations.
- Provide a distraction-reduced environment for assessments or focused project work.
- Allow movement breaks or flexible seating options as needed.
- Maintain consistent classroom routines and clearly posted daily objectives.
- Use visual schedules and checklists to support organization and task completion.
- Provide additional time for transitions between activities or software tasks.

Organizational and Executive Function Supports

- Assist students with project planning, time management, and organization of digital files.
- Provide project timelines with checkpoints and reminders.
- Use task checklists and progress-monitoring sheets during long-term projects.
- Help students organize digital folders and save work appropriately.
- Encourage use of planners, calendars, or digital reminders for assignment deadlines.

Social-Emotional and Communication Supports

- Encourage participation in peer critiques using structured sentence starters and guided feedback forms.
- Provide positive reinforcement and encouragement throughout the creative process.
- Allow students to demonstrate understanding in multiple ways.
- Support student self-advocacy by encouraging questions and clarification requests.
- Create opportunities for collaborative learning with supportive peer partners or groups.
- Foster a classroom culture that values creativity, effort, revision, and individual growth.

Fine Motor and Processing Accommodations

- Allow additional time for precise digital design work requiring fine motor control.
- Provide alternative methods for sketching or brainstorming, including digital sketch tools.
- Reduce repetitive drawing or tracing requirements if they create unnecessary barriers.
- Allow students to verbally explain concepts before translating ideas into digital formats.

English Language Learner and Reading Supports (when applicable)

- Pair visual examples with written directions.
- Simplify complex reading materials and provide audio or translated supports when available.
- Reinforce concepts through demonstrations and hands-on learning opportunities.
- Provide sentence frames for critiques, reflections, and project discussions.

Collaboration with Support Staff

- Coordinate with special education teachers, case managers, counselors, and related service providers to ensure accommodations are consistently implemented.
- Maintain ongoing communication regarding student progress, challenges, and successful strategies.
- Adjust instructional pacing and supports based on individual student needs and documented accommodations.