

Enduring Idea: Technology



Integrated Discipline: Science/Social Studies

Unit Title: The Alchemy of Art: My Very Rich Hours

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Unit Description: The Alchemy of Art discusses the historical manufacture of paint and other artists' materials. Discussion centers on the evolution and manufacture of painters' materials and the painting process, with a strong focus placed on resulting stylistic changes. A variety of artists, styles, and media from the Renaissance through Impressionism will be discussed, including the traditional manufacture of paints and surfaces. With the coordinating studio project, students will study the Columbia Museum of Art's Book of Hours to discover how glair paint and illuminated manuscripts were made.

Images: 2010.1, *The Book of Hours*

Key Concept: Technology affects the evolution of artists' media and materials

Essential Question: Technology affects the evolution of artists' media and materials

CCSS Art: VA1-1.2, Identify and describe the materials, techniques and processes used in a variety of works of visual art.
VA2-1.1, Identify the materials, techniques, and processes in a variety of artworks.
VA3-1.2, Identify and describe the materials, techniques and processes used in a variety of works of visual art.
VA4-1.1, Identify and describe the materials, techniques and processes used in a variety of works of visual art.
VA5-1.1, Identify and describe the materials, techniques and processes used in a variety of works of visual art.

Integrated CCSS: 5-PS1-4 – Conduct an investigation to determine whether the missing of two or more substances results in new substances.

Learning Outcomes: Learners will:

1. Discuss the evolution of traditional painting materials, practices, and artistic identity.
2. Explain how artistic and stylistic innovation is inextricably linked to scientific innovation and invention.
3. Discuss different painting methods, and the specific binders and vehicles involved in each method.
4. Discuss the fundamentals of manuscript illumination, glair and egg tempera painting, and gilding.
5. Create an artwork in the style of an illuminated manuscript

Motivator: Learners will watch the *Secret of Kells*
<http://www.hulu.com/watch/337397>

Day Breakdown: **Day 1:** The teacher will begin by presenting the following:

1. The development and process of manuscript illumination, gold leaf, and the gilding process.
2. Artists' workshops and monastery scribes,

historiated initials, Books of Hours, and the abandonment of illumination following the creation of the printing press will be discussed.

3. Students will be asked to reflect on their hour at the museum and what they have learned, and which specific experiences they would like to describe in their manuscript.
4. Then they will present a copied page of CMA's Book of Hours, as well as a completed example of the studio project.

Day 2: The instructor will conduct a review and distribute the materials for the learner to complete their project.

The teacher will then guide the learners through the creation process by:

1. Instructing students to trace the outside edges of their paper with gold oil pastel; this will serve as the initial border.
2. The instructor will then help students place their letter stencil in the top left hand corner of their paper and instruct students to trace this letter in pencil and illuminate it by using a gold oil pastel.
3. Next, students will draw a rectangular border around their letter using gold oil pastel.
4. Students will then use colored pencils to embellish the initial gold border and to create a historiated initial, which will illustrate or supplement the text that students will be instructed to complete afterwards using black fine-tipped markers.
5. Time permitting, the students can explain their design, how they feel their choices support their story and how these decisions reflect those made by traditional manuscript illuminators.

Day 3-5: Studio, Formative assessment

Day 5: Instructor will close the project by reinforcing how the project relates to the everyday craft of traditional manuscript illumination.

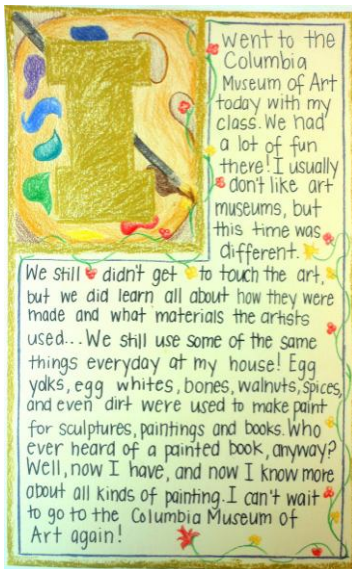
Materials: 8" x 13" pastel paper (cream/ivory preferable)
Gold oil pastels
Illuminated letter stencils

Colored pencils
Fine-tip markers (black)
Pencils

Resources: CMA Permanent Collection, Marguerite Makes a Book

Assessment:

Vocabulary: **Pigment** - colored substance insoluble and physically and chemically unaffected by the medium in which it is dispersed. Popular illuminator's pigments include: shell gold, lapis lazuli, malachite, azurite, vermillion, Minium (red lead), saffron, carmine lake, etc.



Vehicle - liquid carrier of the pigment that adjusts the pigment/binder viscosity to create more elastic paints, if desired. In glair and egg tempera, the vehicle is water.

Binder - liquid in paint that holds pigment particles together and fastens them to a support. In illumination, glair is the binder.

Glair - size or binder made from the settled solution that remains after vigorously beating egg whites.

Egg Tempera - aqueous paint in which the binder is made from egg yolks.

Apprentice - one who is learning a trade or occupation. In the Renaissance, Master painters had many apprentices, whose daily tasks included sweeping, cleaning, errand-running, grinding pigments, making preliminary drawings and painting minor portions of commissions.

Master (painter) - one who has learned his/her trade and has been deemed a Master by exhibition of his/her

expertise to a guild or other authoritative body using one piece, hence the term, "masterpiece."

Workshop - a large-scale studio/business comprised of many young apprentices and headed by a Master painter, whose job includes securing commissions, painting major portions of said commissions, and sharing his trade knowledge with apprentices. Workshops could be family-run or private establishments and remained prevalent through most of Western art history.

Guild - an association of craftsmen in a particular trade. These may be thought of as pre-cursors to contemporary trade unions who had very strict control of the painting trade. Only after their approval was won could apprentices advance to owning their own workshop as a Master painter.

Illumination - the term strictly refers to those images and texts that are embellished using gold or silver leaf but has recently evolved to include all manuscripts from the Western tradition that have been decorated or illustrated.

Manuscript - literally means 'handwritten' and refers to all non-printed materials, including handwritten notes and other notes that have been manually produced by an individual or individuals.

Vellum - a mammal skin prepared for writing or printing on. For illuminated manuscripts, scribes and/or apprentices would roughen the smooth skin using pumice or another abrasive to better accept ink and paint.

Physical Texture - also known as tactile or actual texture; it quite literally refers to the variations of a

surface, whether it be smooth, grainy, or rough. As an element of two-dimensional design, it is differentiated from visual texture by having a feeling, rather than creating the illusion of feeling. This project will explore the possibilities created by physical texture.

Gilding - refers to a collection of processes all directed toward adhering decorative gold leaf or powder onto a solid surface. Gilded objects are described as "gilt."

Book of Hours - the most popular devotional book of the Middle Ages, especially in Northern Europe, where they functioned as signs of both personal devotion and wealth. Named for the hours of the Virgin, the manuscripts combine ecclesiastical documents with prayers, psalms, and the liturgical calendar. Each manuscript was unique and was decorated with miniatures of varying degrees of frequency and intricacy.

Miniature - is a decorated image in an illuminated manuscript that owes its name to the Minium or red lead pigment originally used to create such images, as opposed to its small scale for which the term is most commonly confused.

Historiated Initial - an enlarged letter at the beginning of a paragraph, prayer, or psalm that includes an illustration. These scenes refer to or illustrate the accompanying text, whereas **inhabited initials** refer to figures and pictures created solely for decorative purposes.

Printing Press - a mechanism that applies pressure to an inked surface resting upon a print medium, thereby transferring the ink. The machine was invented by Johannes Gutenberg around 1440 and revolutionized the dispersion and transmission of knowledge, ideas, and art. The invention rendered illuminated

manuscripts defunct in the mid 15th-century as printed materials could be mass-produced and disseminated both wide and far in a rapid manner.