



**Grade/s:** 10-12

10-12

**Enduring Idea:** Passage of Time

**Integrated Discipline:** Social Studies, Science and Technology

**Unit Title:** Transforming Tradition through Technology: Pixelated Soldered Stained Glass

**Unit Designer:** Katie Pfrommer

**Unit Description:** Within this multidisciplinary unit, learners will study the enduring idea *The Passage of Time* throughout the art of stained glass. Selected traditional stained glass artworks from the Columbia Museum of Art will be compared to modern stained glass artworks. Learners will work in groups to create a pixelated soldered stained glass installation that transforms tradition through technology.

**Images:** *Autumn; Winter (from set of Windows Depicting the Four Seasons)*, Daniel Cottier 1995.1.1-2



*Table Lamp*, Tiffany Studios CMA1993.11.40ab



*Clerestory Window Panel (for Auldbrass Plantation, Yemassee, SC)*, Frank Lloyd Wright CMA1993.16



Chuck Close (Pixelated Phillip Glass portrait)

**Key Concept:** Measurement of change, growth & decay, and evolution

**Essential Question:** How does the passage of time leave a mark or lasting impression?

**CCSS Art:** Standard 4: The student will understand the visual arts in relation to history and world cultures and the technologies, tools, and materials used by artists.  
VAH1-4.1 Describe ways that the subject matter, symbols, ideas, and technologies in various artworks are related to history and culture.  
VAH1-4.3 Describe and discuss the function and meaning of specific artworks from various world cultures and historical periods.

**Integrated CCSS:** [CCSS.ELA-Literacy.RH.11-12.7](#) Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.

**Learning Outcomes:**

- Learners participate in motivator activity "Pixelated Post It Puzzle." Teacher leads discussion in the role of technology in contemporary artwork.
- Learners discuss the passage of time through stained glass art history. Learners will view the works of art in the Columbia Museum of Art collection and compare them to contemporary stained glass artwork.
- Learners will compare and contrast a selected CMA stained glass artwork to a selected contemporary art piece.
- Learners will apply the traditional stained glass techniques and work in groups to create a contemporary art installation to be displayed in

the school.

- Learners will reflect on the process through a written critique.

**Motivator:** Pixelated Post It Puzzle

Prep: The teacher creates a pixelated grid of a simple image and creates a blank numbered grid to scale. The teacher assigns each color a coordinated numbered post it.

At the beginning of class, learners are divided into groups and each receives several numbered, colored post it and places them on the grid on the coordinating number. Learners take turns placing post its on the grid and has a turn to guess what their subject matter is. Groups take turns until puzzle is complete or a group guesses correctly. Option: Teacher can draw numbers to randomize the game.

This leads into pixilation and discussion on technology in contemporary artwork.

**Day Breakdown:** Day One: Motivator activity and discussion on the role of technology in contemporary artwork.  
Day Two: Introduction to the enduring idea *passage of time* and discussion of this concept within the art of stained glass. View and critique selected artworks from the Columbia Museum of Art. How can change, growth and decay, and evolution be show visually? How does the passage of time leave a mark or lasting impression?  
Day Two: Review. Discuss Gerhard Richter's Cologne Cathedral Window and introduce *passage of time* unit. Learners will divide into groups and brainstorm subject matter for the pixelated stained glass art installation. Learners will research and sketch ideas.  
Day Three: Demonstration of stained glass process including cutting, grinding, and soldering. Learners will continue to work in groups to plan designs.  
Day Four: First portion of the class, learners will finalize designs. As a class, learners will vote on a design for the class art installation. Before the next class, the teacher will scan and transform the design into a pixelated image using design software.  
Day Five- Ten: Reveal of the pixelated design and assign sections to groups (and individuals). Learners will complete the design first in paper (similar to the motivator activity) to create a

template to use for the process. Learners will apply the demonstrated stained glass techniques to cut, grind, and solder an assigned section. Learners will work together to assemble the sections to create the large installation.

Day Eleven-Twelve: Installation, critique/discussion, review, and written artist statement.

**Materials:** Handheld art app  
Sketchbooks  
Scanner  
Adobe Photoshop or other design program  
Large paper for template  
Large board for mobile work surface  
Stained Glass in colors specific to design  
Paper in same colors as glass  
Rubber cement/glue sticks to adhere pattern  
Glass Cutters  
Cutting Oil  
Grinders  
Grinder coolant  
Silver Lined copper foil  
Burnishing tool  
Tacks to hold foiled pieces in place  
Soldering surface (cut piece of drywall or board)  
Flux  
Solder  
Flux cleaner  
Hardware for installation

**Resources:** Gerhard Richter Cologne Cathedral Window  
<http://www.gerhard-richter.com/art/paintings/other/detail.php?14890>

**Assessment:** Formative Assessments:

- Rubric for Individual Section
- Rubric for Group Squares
- Written artist statement

Summative Assessments:

- Checklist for group work, work ethic, critiques, written work