05_Firing

Content Area: **Art**
Course(s):
Time Period: **Semester**
Length: **1 Week**
Status: **Published**

General Overview, Course Description or Course Philosophy

The Ceramics course is a one semester course designed to offer the students an understanding of the history of ceramics, while giving them an introduction to the fundamentals of hand building and wheel throwing. This is designed to be a hands on learning experience. Emphasis will be placed on the design elements and principles of line, shape, space, texture, and color. Focus will be on hand building methods and techniques including press, pinch, coil and slab. While students will be introduced to building with clay, the craft of wheel thrown pottery will be studied on a limited basis. Additionally, the course will include an examination of clay, glaze, decoration methods, and the firing process. Students will have the opportunity to engage in team work, design, creative problem solving, and critical thinking skills.

OBJECTIVES, ESSENTIAL QUESTIONS, ENDURING UNDERSTANDINGS

Objective(s):

- Students will learn that firing clay is the most critical part of the ceramics process because it is the one thing that makes clay durable, hence ceramic.
- Students will learn that we use electric kiln firing, one of the most common methods for firing clay, because electric pottery kilns are readily available and simple to install.

Essential Question(s):

- How do results vary in the firing process?
- Why is it important to understand the different stages of clay?
- How does one determine criteria to evaluate a work of art?
- How and why might criteria vary?
- How is a personal preference different from an evaluation?

Enduring Understanding:

- Electricity passing through coiled heating elements (made especially for high temperatures) generates radiant heat, which rises and is absorbed by everything in the kiln.
- People evaluate art based on various criteria

CONTENT AREA STANDARDS

Anchor Standards 9: Applying criteria to evaluate products.

HS Proficient 1.5.12prof.Re9

a. Establish relevant criteria in order to evaluate a work of art or collection of works.

RELATED STANDARDS (Technology, 21st Century Life & Careers, ELA Companion Standards are Required)

TECH.8.1.12.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.

STUDENT LEARNING TARGETS

Declarative Knowledge

Students will understand that:

- Heat in an electric kiln is transferred in three ways:

  1.) conduction heat transferred through physical contact
  2.) convection heat rising through the air
  3.) radiation heat emanating from all the kiln elements

- Kiln furniture is needed to hold and support ware during a firing
- Firing is a potentially hazardous activity and all students must obey safety rules to avoid injury.

Procedural Knowledge

Students will be able to:

- Load a bisque kiln.
- Fire full loads to take advantage of conduction heating and also save electricity.
- Assess if work is bone dry. If the work is cool or cold to the touch, it is not bone dry.
- Handle all work very carefully because it is extremely fragile at this stage.
- Establish relevant criteria in order to evaluate fired ceramic pieces.

EVIDENCE OF LEARNING

Alternate Assessments

- Projects
- Presentations
- Teacher/Student Conferences

Formative Assessments

Teacher observation
Teacher feedback and discussions
Performance tasks
Individualized skills assessments

Summative Assessments

Sketchbook

Reflection

Final Project

Portfolio

Art Show

RESOURCES (Instructional, Supplemental, Intervention Materials)

https://ceramicartsnetwork.org/daily/firing-techniques/electric-kiln-firing/firing-clay-ten-basics-of-firing-electric-kilns/#:~:text=Firing%20clay%20is%20the%20most,available%20and%20simple%20to%20install.

Low fire standard white clay

Low fire glazes

Kiln

Kiln shelves

Kiln stilts

Kiln wash

INTERDISCIPLINARY CONNECTIONS

Students will be learn the importance of having a growth mindset during the firing process. As glazeware comes out of the kiln there will be some unexpected results. Acknowledging failure as a step towards progress and eventual success builds resiliance and tenacity in all areas of life.

ACCOMMODATIONS & MODIFICATIONS FOR SUBGROUPS

See link to Accommodations & Modifications document in course folder.