ABSTRACT

See SO 007 721 for an introduction to the Quinmester Visual Arts Education Curriculum of which this is a course of study in creative making. Course objectives include learning about different types of ceramic cast ware and familiarizing the student with clay preparation, handling, forming, decorating, glazing, and firing. Course content is outlined in detail. Special sections on criteria for evaluation of the student's art experience and on resources -- books for historical and practical reference; films and filmstrips; suppliers; professional schools, universities, and workshops specializing in pottery; and local, Florida resources -- complete the guide. (JH)
CREATIVE MOLD MAKING
(Tentative Course Outline)

6683.16
6681.15
6682.15
6687.04

ART EDUCATION

Written by: Louis M. Marinaccio

for the

DIVISION OF INSTRUCTION
Dade County Public Schools
Miami, Florida
1971
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Textbook Services
2210 S. W. Third Street
Miami, Florida 33135
I. COURSE TITLE
CREATIVE MOLD MAKING

II. COURSE NUMBERS
6683.16
6681.15
6682.15
6687.04

III. COURSE DESCRIPTION
Experiences will be provided in making 1, 2, or 3 piece original molds for either pressing or casting of useful or decorative objects. Casts for the molds will be individually produced by hand or on the potter’s wheel.

IV. RATIONALE
Ceramic and pottery arts have occupied an important place in man’s life from the Neolithic period until present time. Objects made from clay are durable, functional, and esthetically pleasing. The contemporary application of ceramic clays are as diversified as any material which is used creatively.
V. COURSE ENROLLMENT GUIDELINES
   A. Pre-vocational
   B. Grades 9-12
   C. No prerequisite for this course

VI. COURSE OF STUDY OBJECTIVES
Competencies expected of the student upon completion of this course in writing or orally:
   A. Definition and background
      The student will be able to do the following:
      1. Differentiate between the outstanding ceramic cast ware of China, Korea, and Japan.
   B. Clay preparation and handling
      The student will be able to do the following:
      1. Demonstrate the process of making slip.
      2. List the equipment used in casting.
   C. Forming
      The student will be able to do the following:
      1. Identify which forms are best suited for casting, pressing, and jiggering.
      2. Construct a one-piece, two-piece, and three-piece mold.
      3. Demonstrate the process of removing a cast object from a three-piece mold.
      4. Demonstrate the ability to choose the best suited method of casting ceramic ware.
D. Decorating

1. Exhibit a working knowledge of material, form, and surface treatment as created by Marguerite Wildenhain, Sheldon Carey, Justin Brady, Jean Derval, and Harrison McIntosh.

2. List the elements of design as they apply to mold making.

E. Glazing

1. Display a knowledge of glazing as it relates to cast ware.

2. Exhibit a working knowledge of glaze texture through analysis of works of contemporary ceramists.

F. Firing ceramic ware

1. Demonstrate the proper procedure for drying, stacking, and firing cast ware.

VII. COURSE CONTENT

A. Definition and background

1. Historical
   a. Asia
      (1) India
      (2) China
         (a) T'Ang Dynasty
         (b) Sung Dynasty
(c) Yuan Dynasty
(d) Ming Dynasty
(e) Ching Dynasty

(3) Korea
(4) Japan

b. Classical
   (1) Etrusca
   (2) Rome

c. Byzantium (Rome)
d. Islam
e. Pre-Columbian
f. Renaissance in Europe

2. Contemporary ceramists
   a. Lyle Perkins
   B. Marguerite Wildenhain
   c. Harrison McIntosh
d. Francis Chun
e. Helen Watson
f. Peter Voulkos
g. Ruppert Deese
h. Jean Derval
i. Justin Brady
j. Sheldon Carey

3. American Indian

B. Clay preparation and handling
   1. Methods of preparing and handling clay
a. Wedging
b. Kneading
c. Conditioning
d. Storing
e. Aging

2. Methods of preparing and handling slip
a. Mixing
b. Deflocculating
c. Conditioning
d. Screening
e. Storing

3. Types of clay and casting slip
a. Earthenware
b. Stoneware
c. Porcelain

4. Equipment and tools
a. Jiggering outfit
b. Pug mill
c. Muller-mixer
d. Wedging boards with cutting wire and canvas
e. Large heavy-duty cans and crocks
f. Plaster and setstone bats
g. Variable speed potter's wheel--foot pedal operated
h. Large natural sponges
i. Flexible rubbers
j. Steel scrapers
k. Large plaster drying bats

C. Forming

1. Methods of forming
   a. Turning
      (1) Jiggering
   b. Pressing
      (1) Press mold
      (2) Sprig mold
   c. Draping
      (1) Drape mold
      (2) Combining
   d. Casting
      (1) One-piece mold
      (2) Two-piece mold
      (3) Three-piece mold
      (4) Drain mold
      (5) Waste mold
      (6) Pour mold
      (7) Case mold
      (8) Flop-over mold
      (9) Slip casting
      (10) Solid casting
      (11) Drain casting

2. Forming cores by handbuilt methods.
3. Forming cores by working on the potter's wheel.
4. Forming a simple one-piece mold for a bowl shape.
5. Forming a two-piece solid casting mold.
6. Forming a three-piece solid casting mold.
7. Removing cast piece from two-piece mold.
8. Finishing a cast piece from a three-piece mold.
9. Trimming and fettling the casting.
10. Creating cast forms that would be difficult, if not impossible, to make in any other manner.
11. Creating a mold requiring a lid.
12. Jiggering a plate.
14. Turning a vase shape from a solid piece of clay to be used to cast a one-piece pour mold.
15. Forming a three-piece drape mold.
16. Creating a sprig mold to be used as a decorative function.
17. Casting a bowl shape from a one-piece drain mold.
18. Creating a functional pitcher form to be cast.
19. Creating a waste mold as well as a plaster model of a coffee urn.

20. Forming a two-piece solid-casting mold.

21. Equipment and tools

- Steel plaster tools
- Sheepwool sponges
- Chisels
- Spatulas
- Mold maker's knives
- Fettling knives
- Sheets of glass
- Plastic bottles
- String
- Sodium silicate
- Soda ash
- Oil
- Clothes pins
- Plaster of paris
- Casting slip
- Rigid steel tooth scrapers
- Wheel turning tools
- Setstone bats
- Polyethylene plastic bags
- Sandpaper (fine)
- Assorted boxwood modeling tools
- Assorted boxwood wire modeling tools
Stearine

Metal sieves complete 120, 100, 80
50, 30
Casting box
Pitcher
Turning box
Turning sled
Deluxe iron wheels - 14 inch head

D. Decorating

1. Methods of decorating
   a. Incising
   b. Sgraffito
   c. Carving
   d. Embossing
   e. Stamping
   f. Texturing
   g. Stenciling
   h. Wax resist
   i. Mishima
   j. Satsuma
   k. Slip painting
   l. Slip trailing
   m. Spraying
   n. Terra sigillata
   o. Impressing
   p. Applique
q. Sprigging
r. Excising
s. Slips and engobes
t. Inlay
u. Underglazes
v. Underglaze crayons
w. Rubber resist
x. Semi-matt
y. Overglazes
z. Matt

2. Materials for decorating

a. Tools

(1) Decorating wheel
(2) Slip trailers
(3) Plastic bags
(4) Large round or flat brushes for glaze and slip application
(5) Bamboo brushes, large and medium for wax resist and other use
(6) Small pointed brushes for detail
(7) Flexible scraper, half-moon shape
(8) Steel plaster and clay modeling tools for sgraffito, blending, incising, scraping, etc.
(9) Elephant ear sponge
(10) Professional boxwood tool
(11) Steel loop modeling tool
(12) Fettling knife
(13) Pencils and India ink
(14) Plastic water container

b. Consumable materials
(1) Slip
(2) Plaster of paris
(3) Engobes
(4) Stencil paper
(5) Wax resist
(6) Rubber resist
(7) Underglaze
(8) Overglaze
(9) Semi-matt
(10) Gloss
(11) Matt

E. Glazing

1. Methods of glazing
   a. Dipping
   b. Pouring
   c. Brushing
   d. Spraying

2. Equipment and tools
   a. Glazing bowl
   b. Pitcher
   c. Two sticks
d. Mesh metal sieve

e. Metal glaze tong

f. Glaze brushes - soft hair, flat - 1/2" to 1"

g. Ceramic spray booth with exhaust fan, stand, and filter

h. Sprayer outfit with gun-compressor

i. 120 mesh sieve

3. Types of glazes

   a. Low-temperature glazes
      (1) Alkaline glazes
      (2) Lead glazes

   b. Middle-temperature glazes
      (1) Bristol glazes

   c. High-fired glazes
      (1) Stoneware glazes
      (2) Porcelain glazes

4. Glaze textures

   a. Transparent
   b. Opaque
   c. Gloss
   d. Matt

5. Glaze defects

   a. Defects due to clay body
      (1) Pinholes and bubbles
      (2) Sandpaper surface
(3) Blistering

b. Defects due to application
(1) Blisters and pinholes
(2) Scaly surface
(3) Running
(4) Chipping
(5) Dryness
(6) Cracking
(7) Bubbles and blisters

c. Defects in glaze composition
(1) Shivering
(2) Crazing
(3) Dull surface on gloss glaze
(4) Crawling
(5) Pinholes and bubbles

F. Firing ceramic ware

1. Preparing ware for firing
   a. Storing (drying cabinet)
   b. Bone dry

2. Procedure for firing kiln
   a. Familiarizing with kiln manual
   b. Applying kiln wash
   c. Stacking kiln for bisque firing
   d. Stacking kiln for glaze firing
   e. Measuring and managing kiln temperature
(1) Cones

/ (2) Pyrometer

f. Following firing schedule
g. Following cooling schedule
h. Removing ware from kiln

3. Defects due to improper firing

a. Shattering
b. Cracking
c. Warping
d. Blistering
e. Pinholing
f. Glaze crawling
g. Melting
h. Crazing
VIII. EVALUATION

A. It is essential to establish a criteria for evaluating the progress of the student in an art experience. Evaluation in ceramic art cannot be rigid to the extent that it will inhibit creative expression. Creativity is unique and personal.

The product itself cannot be evaluated without taking into consideration the process the student experienced from inception to completion. In addition, evaluation must include evidence of the growth of the individual in relation to his attitude, interest, ability to complete a project, how well he can use his past experience toward problem solving, respect for his own ability and the rights of others.

Evaluation is of vital importance to the student's development. It helps to determine the growth of the student so that the teacher can further motivate and guide the students toward his fullest self-development, creativity and aesthetic growth.

B. The criteria established for evaluation will vary due to individual differences among students and teachers. Each teacher must determine his own
goals and formulate standards for evaluation always keeping in mind that evaluation must be positive as well as constructive.

The following are some suggestions in setting up criteria for evaluation:

1. Has the student learned to evaluate his own pottery as well as that of others with consideration to the sensuous quality of the clay, form, and content?

2. Has the student designed the entire object with an awareness of space, form, movement, order, relationship of parts to the whole, and good color organization?

3. Has the student expressed his ideas creatively in the medium in an original and meaningful way?

4. Has the student developed a sensitivity to the material?

5. Does the student express his ideas and individuality in clay?

6. Has the student become aware that texture results from an interaction of the clay and the tools?

7. Is the student aware of the difference between tactile and visual textures?
8. Has the student become sensitive to the expressive qualities of the different clay materials and tools?

9. Is the student aware that improper use of material and tools results in poorly constructed forms?

10. Is the student aware that variety can add interest to forms but too much can destroy it?

11. Does the student react empathically to clay in terms of three-dimensional forms?

12. Is the student familiar with good ceramic art of the past and present?

13. Is the student able to identify from contemporary ceramists the ways in which the craftsmen manipulate their tools and materials?

14. Has the student developed good work habits?

15. Has the student's behavior outside the art class improved as a result of his art experience?

16. Has the student developed a respect for his personal ability?

17. Has the student developed a respect for the rights of others?

18. Has the student acquired increased efficiency in handling materials and tools?
19. Has the student developed the ability to carry the project through to completion?

20. Has the student learned the firing process and how to use it to its fullest advantage?

21. Has the student developed good craftsmanship and yet retained the natural qualities of the clay?

22. Has the student learned to form pottery correctly so it does not warp or crack?

23. Is the product suited for the purpose for which it was made?

24. Does it incorporate the principles of good ceramic design?

25. Is the product the one best suited for work in clay?

26. Is the product well constructed?

27. Does the product indicate individuality and expressive quality?

28. Does the glaze fit the form?

29. Has the student improved in attitude, interests, and development of technical skills?
IX. RESOURCES

A. Suggested Texts


B. Suggested References

General


Egyptian


Ancient Near East


Asia (India, China, Korea, and Japan)


Savage, George, Pottery through the Ages, New York: Pelican, 1954.

Classical: (Crete, Greece, Etrusca, and Rome)


**Byzantium**  (Rome)


**Islam**


**Pre-Columbian**


Renaissance in Europe


C. Suggested Periodicals for Pupils

Craft Horizons
29 West 53rd Street
New York, N. Y., 10019

Ceramics Monthly
Box 4548
Columbus, Ohio 43212

Design Quarterly
1710 Lyndale Avenue
Minneapolis 3, Minn.

School Arts
50 Portland Street
Worcester, Mass., 01608

D. Suggested Places to Visit

Grover House School of Art
3496 Main Highway
Coconut Grove, Florida 33133

Sandpiper
2924 Florida Avenue
Coconut Grove, Florida 33133

Village Corner Gallery
1136 South Dixie Highway
Coral Gables, Florida

Lowe Art Museum
1301 Miller Drive
Coral Gables, Florida
Miami Art Center
7867 North Kendall Drive
Kendall, Florida

Ceramic League of Miami
7867 North Kendall Drive
Kendall, Florida

Miami Museum of Modern Art
381 N. E. 20th Street
Miami, Florida

Grove House Gallery
3496 Main Highway
Coconut Grove, Florida

Museum of Science-Planetarium
3280 South Miami Avenue
Miami, Florida

Fairchild Tropical Garden
10901 Old Cutler Road
Coral Gables, Florida

Fantastic Gardens
9550 S. W. 67th Avenue
Miami, Florida

Miami Seaquarium
Rickenbacker Causeway
Virginia Key, Florida

Crandon Park Zoo
Key Biscayne, Florida

Scholastic Art Awards Exhibition
Burdine's Department Store
27 East Flagler Street
Miami, Florida

Miami Studio Shop
2363 West Flagler Street
Miami, Florida

Bass Museum of Art
2100 Collins Avenue
Miami Beach, Florida

Japanese Gardens
MacArthur Causeway
Miami, Florida
Viscaya Art Museum
3251 South Miami Avenue
Miami, Florida

E. Ceramic League of Miami Resource People

Virginia L. Davis
Edmund O. Weyhe
Chili Emerman
Barbara Garrett
Geri Popenoe
Marilyn Sherwood
Lynn Glatstein
Natalie B. Linder
Janel Lund
Juanita May
Genevieve McCrea
Marie Furman
Mary Grabill
Elinor Jensen
Inga Lukat
Chris Rosean
Richard Bugdal
Jean Guthrie
Josephine Kamp

Carol King
Evelyn C. Smiley
Fran Williams
Irene Batt
Dorothy Bosco
Marcy Dunn
Nettie Wintie
Edythe Powell
Virginia G. Stemples
Mary J. Acosta
Edna DeLine
Jacquelyn Ferguson
Henry Gordon
Lillian H. Stoff
Terry Weinberger
Joy Lindskold
Davi Justi
Janet Festinger
P. Suggested Media Resources for Pupils and Teachers

Filmstrips

American Crafts Council
Research and Education Department
29 West 53rd Street
New York, N. Y. 10019

Contemporary Ceramics
U. S. A., 1966

Forms from the Earth:
1000 Years of Pottery in America 1962

Scholastic Film Strips
906 Sylvan Avenue
Englewood Cliffs, N. J. 07632

Art by Talented Teen-Agers - 1970:
Sculpture and other Three-Dimensional Art

Art by Talented Teen-Agers - 1969:
Sculpture and other Three-Dimensional Art

Art by Talented Teen-Agers - 1968:
Sculpture and other Three-Dimensional Art

Art by Talented Teen-Agers - 1967:
Sculpture and other Three-Dimensional Art

Art by Talented Teen-Agers - 1961-1966:
Sculpture and other Three-Dimensional Art

Collected Works of Teen-Age Art
Sculpture and other Three-Dimensional Art

Slides

American Crafts Council
Research and Education Department
29 West 53rd Street
New York, N. Y. 10019

P6 Three Ceramists: Gronborg/Leedy/Williams, 1969-
Ceramic sculpture from one-man exhibitions at
M. C. C.
C14 Young Americans, 1969 - Winning entries in all craft media from the national competition of this title sponsored by the American Crafts Council.

C 7 Ceramics of Maija Grotell, 1968 - Pottery by the head of the Department of Ceramics at Cranbrook Academy of Art from 1938-1966.

B14 Craftsmen U. S. A. '66 - National Merit Awards in a competition sponsored by the American Crafts Council; covers all craft media.

B 1 The American Craftsmen, 1964 - 30 craftsmen and their work in clay, metal, wood, and textiles.

A14 Forms from the Earth, 1000 Years of Pottery in America, 1962 - A summary view of pottery in America up to 1961.

A13 Young Americans, 1962 - Winning entries in all craft media from the national competition of this title sponsored by the American Crafts Council.

A6a Katherine Choy, 1961 - Pottery from a retrospective exhibition at M. C. C.

F11 General Ceramics, 1960 - Functional and sculptured ceramics by contemporary American craftsmen.

D 5 Contemporary Ceramics U. S. A., 1966 - Works by 77 American Craftsmen.


F 4 Objects U.S.A., 1969 - A selection of work in all media from the Johnson Collection of Contemporary Crafts.
B12 Folk Art of North India, 1966 - Ceramics, embroidery, applique, and jewelry from North Indian.

G10 Salt Glaze Kiln: building/firing, 1969 - Construction and firing at the Byron Temple Studio; script gives additional information on materials and techniques.

The Raku Process, 1969 - Paul Soldner photographed as he fires pottery by the raku process.

Prothmann Associates, Inc.
2795 Milburn Avenue
Baldwin, New York 11510


G. Resources for teachers

Films

Audio-Visual Center
Indiana University
Bloomington, Indiana

Craftsmanship in Clay

Periodicals and Professional Journals for Teachers

Ceramic Age
9 Chester Building
Cleveland 14, Ohio

Ceramic Industry
5 S. Wabash Avenue
Chicago 3, Illinois

Ceramic Data Book
Industrial Publications
5 S. Wabash Avenue
Chicago 3, Illinois

Ceramics Monthly
Box 4548
Columbus, Ohio
W. H. Fairchild
712 Centre Street
Freeland, Pennsylvania

O. Hommel Company
209 Fourth Avenue
Pittsburgh, Pennsylvania

Kentucky-Tennessee Clay Company
Mayfield, Ohio

U. S. Stoneware Company
Akron, Ohio

A. D. Alpine, Inc.
11837 Teale Street
Culver City, California

Advanced Kiln Company
2543 Whittier Boulevard
Los Angeles, California

Garden City Clay Company
Redwood City, California

Western Ceramic Supply Company
1601 Howard Street
San Francisco, California

Western Stoneware Company
Monmouth, Illinois

American Art Clay Company
4717 West 16th Street
Indianapolis, Indiana

Denver Fire Clay Company
3033 Black Street
Denver, Colorado

Van Howe Company
1185 South Cherokee Avenue
Denver, Colorado

Miami Studio Shop
2363 W. Flagler Street
Miami, Florida
Professional Schools, Universities, and Workshops Specializing in Pottery

Troy State College
Troy, Alabama

Northern Arizona University
Flagstaff, Arizona

Arkansas Arts Center / School of Art and Drama
MacArthur Park
Little Rock, Arkansas

University of California
Department of Design
234 Wurster Hall
Berkeley, California

University of California
Davis, California

Mills College
Oakland, California

San Jose State College
San Jose, California

California College of Arts & Crafts
5212 Broadway at College Avenue
Oakland, California

Pond Farm Pottery
Guereneville, California

University of Colorado
School of Art
Denver, Colorado

The Corcoran School of Art
17th Street at New York Avenue, N. W.
Washington, D. C.

Georgia State College
33 Gilmer Street, S. E.
Atlanta, Georgia

School of the Art Institute of Chicago
Michigan at Adams
Chicago, Illinois
University of Illinois
College of Fine & Applied Arts
143 Fine Arts Building
Urbana, Illinois

Indiana University
Fine Arts Building
Bloomington, Indiana

Indiana State University
Fine Arts Building
Bloomington, Indiana

Indiana State University
Terre Haute, Indiana

Wichita Art Association
9112 East Central
Wichita, Kansas

Louisville Art Center School
2111 South First Street
Louisville, Kentucky

Newcomb College Art Department of
Tulane University
New Orleans, Louisiana

Haystack Mountain School of Crafts
Deer Isle, Maine

Boston Museum School
230 Fenway
Boston, Massachusetts

Plymouth Pottery
42 Summer Street
Plymouth, Massachusetts

Cranbrook Academy of Art
55 Lone Pine Road
Bloomfield Hills, Michigan

Rochester Art Center
320 East Center
Rochester, Minnesota

University of Missouri
Department of Art
Columbia, Missouri

University of Montana
Art Department
Missoula, Montana
University of New Hampshire
Department of the Arts
Durham, New Hampshire

Newark Museum of Art
43-49 Washington Street
Newark, New Jersey

State University of New York
College of Ceramics
Alfred University
Alfred, New York

Brooklyn Museum Art School
Eastern Parkway
Brooklyn, New York

Craft Students League
840 Eighth Avenue
New York, N. Y.

Greenwich House Pottery
16 Jones Street
New York, N. Y.

The New School for Social Research
66 West 12th Street
New York, N. Y.

Clay Art Center
40 Beech Street
Port Chester, L. I., New York

School for American Craftsmen
Rochester Institute of Technology
65 Plymouth Avenue, South
Rochester, New York

Syracuse University
School of Art
309 University Place
Syracuse, New York

Penland School of Crafts
Penland, North Carolina

Cleveland Institute of Art
11141 East Boulevard
Cleveland, Ohio
Ohio University
Athens, Ohio

Millersville State College
Millersville, Pennsylvania

Rhode Island School of Design
Providence, Rhode Island

Museum School of Art of Houston
1001 Bissonnet
Houston, Texas

Stout State University
Menomonie, Wisconsin

Wisconsin State University
River Falls, Wisconsin
Suggested References for Teachers


Lane, Arthur, Early Islamic Pottery, London: Faber, 1939.


Wildenhain, Marguerite, Pottery Form and Expression, New York: Rheinhold, 1959.


X. BIBLIOGRAPHY


