Course Philosophy:

We have a responsibility for modeling and teaching the skills and attitudes that each student will need to meet the challenges of our technological society. The staff member will work closely with parents to maintain open communication about the program, progress, and problems of each student. The staff member is committed to setting and fostering a climate in which classroom and other learning activities have first priority; in which discipline and order are maintained through mutual respect; in which a sense of dignity and self-esteem is fostered; and in which everyone is encouraged to do his best. It is only through such efforts that education remains alive and meaningful. Screen Printing fosters this development by giving a foundation of industrial skills, consumer knowledge, and desirable attitudes necessary for happier and more effective living.

*Note: Highlighted Text is Technology Utilized*
Scope of Screen Printing Technology:

Screen Printing is a course whereby students will become familiar with screen printing through varied hands-on activities involving the many different methods and processes of screen printing. Beginners will find it easy to learn the process and produce excellent work. Ingenuity and originality will come as more experience is gained, and as the student becomes more conscious of printing and lettering styles which are adaptable to the job at hand and to screen reproduction.

Students will utilize a wide range of materials and processes ranging from hand-cut stencils to photographic screen production. Some of the activities will include the printing of bumper stickers, posters, portfolios, and t-shirts, all ranging from single color to multi-color printings.

Course Objectives:

- Create an awareness of how the communicated word is produced.
- Originate and make projects for personal use as well as for others.
- Experience inter-action among peers in sharing work to produce a product.
- Examine attitudes and occupations in related career fields.
- Understand the relationship with industry and the “world of work”.
- Reinforcement of reading and math skills.
- Insure good work habits such as promptness, responsibility, cooperation, following directions, reading directions, and writing skills.

Benchmark Assessments

- 50%...Class Work/Project Assignments
- 20%...Tests
- 10%...Open Book Reading/Writing Assignments
- 20%...Teacher Observation of Preparation/Participation/Attitude/Behavior

- Following the distribution and discussion of the Safety & Classroom rules, a test will be given to all students. Students must pass 2/3 of such questions before being permitted to operate shop equipment.
- Teacher observation will be used to evaluate student proficiency in operating various pieces of shop equipment. Following each demonstration, each student is required to immediately (or as soon as practicable) operate such machine in a practice mode.
- Students will be evaluated by the following methods:
  - Response to following directions
  - Class performance-work habits
  - Layout grades
  - Final printed copy grades
  - Teacher observation
  - Safety test results – safe habits
  - Clean up & maintenance of room & equipment on daily, weekly, & end-of-year basis
  - Test results
  - Open book reading/writing assignments
  - Extra credit work
### GRADE: 9 – 12

#### OBJECTIVE

The student will become familiar with and understand:

- Attendance policy
- Physical classroom
- Class assignments
- Classroom rules
- Safety rules
- Objectives of the course
- Grading system & requirements
- Career options

The student will:

- Define all safety precautions in a graphics shop.
- Identify safety precautions on production equipment.

The student will:

- Identify and describe the many advantages of the screen printing process.
  - Use & Importance
  - Color
  - Low Cost
  - Versatility
  - Flexible Size

- Identify that screen printing is a stencil process.

- Identify and describe the various stencil methods used.
  - Paper stencil
  - Tusche & glue
  - Show card mixture for reverse printing
  - Indirect photographic
  - Direct photographic
  - Lacquer film stencil

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#### CPI#

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<thead>
<tr>
<th>Objective</th>
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<tr>
<td>The student will become familiar with and understand:</td>
<td>9.1.4.A.2</td>
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<tr>
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<td>9.1.4.A.3</td>
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<td>...the physical classroom</td>
<td>9.1.4.A.5</td>
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<td>...the class assignments</td>
<td>9.1.8.A.1</td>
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<td>...the classroom rules</td>
<td>9.1.12.A.1</td>
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<td>...the safety rules</td>
<td>9.1.4.F.2</td>
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<tr>
<td>...the objectives of the course</td>
<td>9.1.4.F.3</td>
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</tbody>
</table>
SUBJECT: Screen Printing Technology

TOPIC

EQUIPMENT (3 Weeks)

GRADE: 9 – 12

OBJECTIVE

The student will:

…identify, list & describe typical screen printing equipment utilized:

- Screens
  - Wooden Frame
  - Fabrics
  - Materials
  - Mesh Opening
  - Thread
  - Construction

- Hinged Printing Base
- Stencils (see “THE PRINCIPLE OF SCREEN PRINTING” topic)
- X-Acto Knife
- Squeegee
  - Size Selection
  - Blade Selection
- Ink Knife
- Inks
  - Poster Inks
    - Flat
    - Semi-Gloss
    - Gloss
  - Fluorescent Inks
  - Enamel Inks
  - Acrylic Inks
  - Textile Inks
  - Specialty Inks
    - Lacquer
    - Epoxy
    - Plastic
    - Metallic

- Solvents
  - Water Soluble
  - Mineral Spirits
  - Acetone

- Printing Stock
  - Paper
  - Cardboard
  - Textiles
  - Miscellaneous Materials
    - Leather
    - Wood
    - Glass
    - Plastics
    - Metal
    - Ceramics

PAGE 2

CPI# 9.4C(4)1.1
9.4C(4)1.4
9.4C(4)1.6
9.4C(4)1.7
9.4.12K.10.1
9.4.12K.10.2
# SUBJECT: Screen Printing Technology

## TOPIC
COLORS & COLOR MIXING  
(2 Weeks)

## GRADE: 9 – 12

## OBJECTIVE
The student will:

- Identify the colors on a color wheel.
  - Primary
  - Secondary
  - Tertiary
  - Tint
  - Shade

- Identify color harmonies to include:
  - Triadic
  - Analogous
  - Monochromatic
  - Complimentary
  - Warm and cool hues

- Explain & describe what color is:
  - The qualities of color
    - Hue
    - Intensity
    - Saturation
    - Purity of Color
    - Chroma
    - Value

- Explain & describe the uses of color:
  - Emphasis
  - Contrast
  - Identification
  - Appearance
  - Impact

## CPI#  
9.4.12O.2.5  
9.4.12O.2.8  
9.4.12O.2.9  
9.4.12O.2.13  
9.4.12O.3.4
SUBJECT: Screen Printing Technology

TOPIC

GENERATE, MANIPULATE & EDIT DIGITAL IMAGES (3 Weeks)

GRADE: 9 – 12

OBJECTIVE

The student will:

...explain methods of art and copy generation for various mediums.

...describe editing/manipulation in various application.

...learn and demonstrate proficiency in generating assorted graphic images for reproduction using appropriate software.

...file management of digital images.

The student will:

...identify, describe and use the tools & materials.

- Lacquer film stencil
- X-Acto knife
- Cellophane tape
- Light table
- Straight edge
- Cloths
  - Adhering
  - Drying
- Lacquer thinner
- Adhering fluid
- Stacking pad
- Alligator clips
- Safety gloves

...demonstrate proficiency in cutting film stencils.

- Prepare the design
- Attach design to film
- Cut design on the film
- Remove film from print areas

HAND-CUT FILM STENCILS (5 Weeks)

CPI#

9.4.12K.10.1
9.4.12K.10.2
9.4.12C.7.4
9.4.12C.7.5
9.4.12C.7.6
9.4.12C.8.1
9.4.12C.9.1
SUBJECT: Screen Printing Technology  
TOPIC: HAND-CUT FILM STENCILS  
CONTINUED

GRADE: 9 – 12

OBJECTIVE

The student will:

...demonstrate proficiency in preparing a screen for film adhesion.
  • Secure & clean a screen

...demonstrate proficiency in attaching the film stencil to the screen.
  • Position film to screen using stacking pad
  • Clip screen, stencil, stacking pad, flat base as one unit
  • Attach with two cloths
  • Allow fluid to evaporate
  • Remove clear backing sheet

...troubleshoot hand-cut film stencils; what is the symptom, what the cause is, and what the cure is.
  • Stencil will not adhere to the screen
  • Parts of film must be wetted several times before they stencil adheres
  • Edges of impression melt or do not adhere well

MASKING
(4 Weeks)

The student will:

...demonstrate proficiency in masking nonprinting areas.
  • Paper Mask
  • Liquid Mask
  • Tape Mask

CPI#

9.4.12K.10.1
9.4.12K.10.2
9.4.12C.7.4
9.4.12C.7.5
9.4.12C.7.6
9.4.12C.8.1
9.4.12C.9.1
SUBJECT: Screen Printing Technology

TOPIC

REGISTRATION
(4 Weeks)

THE PRINTING PROCESS
(5 Weeks)

GRADE: 9 – 12

OBJECTIVE

The student will:

...demonstrate proficiency in properly aligning & registering designs.

- Three-Point registration
- Transparent-Flap-Overlay registration

The student will:

...demonstrate proficiency in the actual printing process.

- Area setup
- Squeegee selection
- Ink selection & distribution
- Alignment of piece being printed on
- Squeegee technique
- Kick leg employed
- Storage of printed item(s)
- Repeat the procedure until all pieces have been printed

......troubleshoot the printing process; what is the symptom, what the cause is, and what the cure is.

- Ink dries in image area too often
- Substrate sticks to screen after printing
- Small spots appear in the print
- Parts of image do not print
- Image blurs
- Spots of ink show up in odd places on print – different every time
- Lines of heavy ink deposit appear in image
- Fine detail fills in
- Prints seem dry but stick to each other when stacked
- Screen won’t come clean

CPI#

9.4.12K.10.1
9.4.12K.10.2
9.4.12C.7.4
9.4.12C.7.5
9.4.12C.7.6
9.4.12C.8.1
9.4.12C.9.1
MULTICOLOR PRINTING
(4 Weeks)

The student will:

...demonstrate proficiency in properly aligning & registering designs utilizing two or more colors.
  • Three-Point registration
  • Transparent-Flap-Overlay registration

......troubleshoot the multicolor printing process; what is the symptom, what the cause is, and what the cure is.
  • Multicolor imprints do not print in register

CARE & CLEANING OF EQUIPMENT
(3 Weeks)

...identify and list appropriate solvent for each substance:
  • Lacquer film
  • Water soluble filler
  • Tusche (in liquid form)
  • Tusche (when hardened)
  • Glue
  • Water based ink
  • Acrylic ink
  • Textile ink

...demonstrate proficiency in cleaning screens.

...demonstrate proficiency in reclaiming screens.

...demonstrate proficiency in cleanliness of printing area.

...demonstrate proficiency in personal cleanliness.
CAREERS IN THE SCREEN PRINTING INDUSTRY (2 Weeks)

OBJECTIVE

The student will:

…identify and describe the many advantages of jobs in the printing industry:

- Pay is generally above average.
- Working conditions are comfortable.
- Most firms offer good benefits and security.
- Opportunity for advancement.
- Little affected by recessions and layoffs.

…identify, list and describe the general categories of jobs in the printing industry:

- Creative
- Professional
- Technicians
- Skilled craft-workers
- Sales
- Management
- Education

…research more information on graphic arts occupations via:

- Books
- Educational institutions
- Occupational Outlook Handbook
- Associations
  - The United States Department of Labor – Bureau of Labor Statistics
  - Screen Printing Association, International
  - Printing Industry of America