DEVELOPING A STUDY GUIDE FOR PRINTMAKING

ON THE MIDDLE SCHOOL LEVEL

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A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

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BY

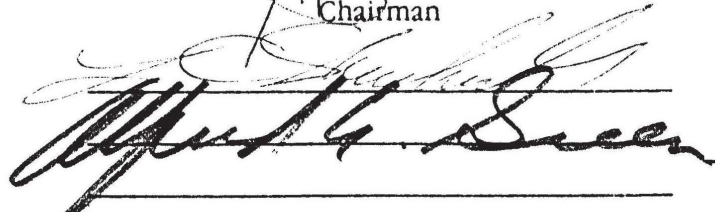RHONDA ANN SHERRILL, B.S.

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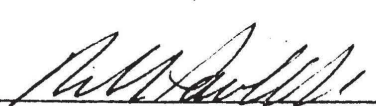# Texas Woman's University

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We hereby recommend that the _____ thesis _____ prepared under

our supervision by __Rhonda Ann Sherrill__

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TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

INTRODUCTION

This thesis has been written to help any novice, whether teacher or student, have a basic understanding, appreciation, and knowledge of printmaking.

It has been five rather wonderful years of teaching art for this author, and printmaking has been a great part of that experience. Teaching printmaking can be very simple or very complex depending upon the degree of difficulty of the technique. The gratification of teaching printmaking evolves within the students' response and enthusiasm. Other factors involved in teaching printmaking rely upon the cooperation of the school system, availability of funds and supplies, and the knowledge required to transmit the stimulating response to the students.

Chapter I introduces the history of printmaking from the invention of paper through the year of 1900 A.D. All of the major categories of printmaking were invented before the twentieth century. Of course many new developments and more technical processes have been created since then, but this entire thesis pertains to the basic fundamentals of the idea of printmaking.

In Chapter II, history is also the subject except it gives a brief theoretical idea of Art Education since the turn of the century.

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The author of this thesis believes in the theory of environment versus attitude. Hopefully, this chapter gives the reader an explanation of why Art Education has evolved as it has today.

Finally, the main goal for this thesis is displayed in Chapter III. This chapter is a "How To" mini manual based strictly on the author's experience in the classroom. The contents may be used for the classroom or for individual assistance in learning different printmaking techniques. Photographs have been added to reinforce a complete visual and cognitive understanding for each project.

The image making process created by one or many printmaking techniques can result in a totally satisfying and gratifying experience, both for adults and young people. Gratifying experiences have proved over and over to this "author-teacher" that the middle school level is perfectly capable of appreciating printmaking. The understanding of their environment, appreciation for other printmakers, and experience with different materials and tools will go with them for the rest of their lives.

Statement of the Problem

There has been a definite need for developing a printmaking program on the middle school level. Many authors and artists have forgotten the adolescent age. This thesis is a basis for applicable techniques of printmaking using graphics and mixed media.

Purpose of the Study

This study has enhanced the art curriculum on the middle school level and has developed a greater appreciation, inspiration, and understanding of printmaking.

Justification for the Study

There is very little written on art education specifically for the middle school level. This study guide has prepared projects that answer questions about the various techniques of printmaking and has added reinforcement by showing examples of students' work.

Background

The creative discovery of printmaking has always been intriguing to the visual fascination of the mind. During the years of teaching on the middle school level, the author has recognized printmaking as a totally different media from other art forms introduced on this level. It is not enough just to learn the techniques; it is the final visual effect that keeps the students interested. Other art projects in the curriculum are introduced and acquired through the medium of printmaking. Through design, drawing, and freeform preparation processes, the actual printing on various papers and fabrics, using different colors and kinds of ink, keeps the interest of the students. The outcome, whether it be a mono-print, a run of prints, or experimental printing, is usually the same; students are amazed at the finished product.

There is a lack of information for the middle school art programs, especially for printmaking. Authors and educators tend more toward writing about elementary school art or high school art rather than the abounding creativity of the middle school adolescent. Junior high schools are a combination of seventh, eighth, and ninth graders; the middle school level handles the sixth, seventh, and eighth graders. The middle school level is a recent innovation of the late 1960s. As far as most middle school art curriculums are concerned, the art teachers stay within the limitations of generalization, such as the elements of art, and initiate an acquaintance with the different media. This study adds an awareness of the important effect printmaking can have in a middle school art curriculum.

Delimitations

1. This thesis begins with a brief history of printmaking and art education and incorporates printmaking projects that have been completed by middle school students.

2. This study is concerned with the middle school level--sixth, seventh, and eighth grades--and deals with the adolescent expectations and limitations.

3. This study reinforces the "image making" process: the importance of discovery of actually creating with the ink medium and the outcome and the outgrowth involved with printmaking.

4. This study presents some successful printmaking projects, techniques, supplies needed, and objectives to be accomplished.

Methodology

1. The researcher has acquired knowledge of the history of printmaking, art education methods, and other data needed for this study through books, periodicals, and other written information.

2. This study begins with a brief introduction to the subject matter based on proven written information and ends with the researcher's theory and experienced methods of teaching printmaking.

3. Examples of student work show finished printmaking projects, as well as work in progress, in order to reinforce the written study with a visual understanding.

4. Each of the printmaking projects presented in this thesis includes objectives, supply lists, procedures, and techniques.

CHAPTER I

PRINTMAKING: BRIEF HISTORY TO 1900 A.D.

History tells us that the Chinese invented paper in the years 100 to 105 A.D., an invention which revolutionized the world. Paper was the means by which printmaking could occur. Not only was printmaking a form of mass communication, but it gave artisans a new way to express lifestyles and environment. It was the visual transfer of physical involvement that the artist dealt with that made this new medium unrelenting for centuries.

Although the invention of paper occurred so long ago, printmaking, as we know it, did not emerge as a true medium until the 1400s when oil paints were developed. From the oil paints came the black pigments for inks. The years between the invention of paper and the emergence of printmaking as an art form did not lie dormant. During those years an art form called "stone prints" was invented. "Stone prints" is a term used for the more commonly used word, "rubbings." The Chinese not only invented paper, but developed "stone prints" reproduced with the use of relief slabs of carved stones. By doing this process, they transferred the lessons of Confucius to paper and made multiple copies. Vellum, papyrus, or other ancient forms of substitutes could not produce the same sensitive results as paper.

Rubbings were created by placing a dampened piece of paper on a flat relief stone image, allowing the paper to fit the grooves. Then the artist would take a blotter of ink and dab it over the image. The objective was not to allow the ink into the recessed grooves. This process would yield a duplicate copy of the stone image that would not be a print in reverse.[1]

Ever since man was created, he developed a use for communication; image making told the story. Before paper or papyrus there was clay. Ancient man learned how to mold, carve, and harden the earth into works of art. They were not only for declaring a king or a God, but for shelter and food preservation. Whether it was a monument, temple, house, or an insignificant bowl for grain, ancient man decorated his work. Some of the work was painted from the natural earth colors, while still other works were decorated with forms of impressions or reliefs. These impressions and reliefs began like pictographs. A good example was the Egyptians' use of hieroglyphs. Eventually man realized he could mark his belongings with a symbol or sign representing his family man or ownership. Branding irons, of more contemporary times, are a good comparison to the ancient symbols used. This form of marking is called stamping. The stamping tools were made of clay or wood and later of metal.

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[1]Norman R. Eppink, 101 Prints: The History and Techniques of Printmaking (Oklahoma: University of Oklahoma Press, 1974), p. 198.

Mesopotamians carved limestone, steatite, alabaster, and lapis lazuli. These carved seals were stamped on wet clay, making the impression of ownership or authority. If ink had been invented, Mesopotamians would have been the first printmakers according to many scholars who argue that a multiple copy of an image is a print. Other ancient cultures used stamping, such as Babylonia, Rome, and Ancient Mexico. Babylonians stamped kings names on the bricks of their palaces. Wine dealers of Rome used stamping for identifying their jars. Around 1000-800 B.C., the Almecs of Mexico made clay tubes for relief patterns (Mexican Rolling Tubes).

The Chinese must be credited for the invention of paper and for the development of the relief print technique. The most commonly used relief forms were woodblocks. One of the oldest examples of a Chinese woodcut was found in the Caves of the Thousand Buddhas in Western China. The religious illustration appeared in the Diamond Sutra, title page to the text of a Sanskrit book dated ninth year of Hsien-t'ung or 868 A.D., a Buddist scripture.[1]

Six hundred years after the invention of paper, the western world (Europe) was just beginning to discover the full benefits of printmaking. The first prints mainly represented religious icons sold for the salvation of the buyer. The other main use of the first prints was playing cards. Playing cards were for dreamers

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[1] Donald Saff and Deli Sacilotto, Printmaking: History and Process (New York: Holt, Rinehart, and Winston, 1978), p. 8.

while in sharp contrast were the patron saints of the religious orders. One of the oldest surviving woodblocks was found in 1899 in a monastery in eastern France during its demolition. The woodblock dated around 1370-1390. It was thought to have been used for printing on a large surface, such as a banner.[1]

Papermaking spread from China to North Africa to Spain by 1150, and by 1275 was in Italy, and in Germany by 1390. The Italians changed the production of paper from the Oriental way to their method by using animal fat for sizing. The Chinese used the hand pounding method, and the Italians speeded the production by using water-powered hammers for breaking down the rags. By this period in history, cloth merchants were already printing on fabric. The production of paper stimulated these printmakers into using paper instead of fabric. The market for making paper was very evident as printing on paper had become very productive.

Productions of books and other printed documents were on the increase during 1450 and 1500. As early as 1395, a German was printing holy images on paper in Bologne. German printmakers would paste their woodblocks inside book covers and boxes. Therefore, evidence survives informing us that the Germans were the first to print on paper as printmakers in Europe.

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[1]A. Hyatt Mayor, Prints and People: A Social History of Printed Pictures (New York: Metropolitan Museum of Art, Meriden Gravine Company, 1971), pp. 5-8.

The first surviving dated print is a Dutch Madonna around 1418 carved on a block; next is a German Saint Christopher which was printed around 1423. The earliest Italian print was the subject of a Miracle in 1428, when it was locked in a school room wall in Froli.

> There it certainly would have yellowed until thrown away had not the school caught fire on a February day. The crowd gathered outside saw this paper shoot up out of the flames, hover over the hot updraft, and flutter down into their hands. With cries of "Miracle" the print was carried into the cathedral. There, in 1636, a special chapel was dedicated to it--the world's first still handsomest print room-- where the image still survives in fair shape behind a gilt- bronze plaque that protects it from light except when it is raised like a theatre curtain once a year to the sound of all the towns bells.[1]

In 1309-1376, the woodcut became a medieval industry. Shrines were sanctified for selling woodcuts. They were printed on vellum to make it last as an amulet for health insurance. Some of these holy images were to be used for burial purposes to fight against purgatory; some were for wounds and sores; others were to be swallowed. In 1520, Martin Luther pointed out that the miracle wonder-working relics were not doing what the church really purposes as the true meaning of the church.

At this point, German and Austrian pilgrim shrines stopped getting the crude woodcuts made locally or made in monasteries. They started ordering more refined pictures from the engravers in Antwerp, Augsberg, or Nuremberg. "These engravers took away half the trade

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[1]Ibid., pp. 8-9.

from the woodcutters, who had served both God and the devil by supplying holy pictures and playing cards."[1] Holy pictures all but disappeared by the French Revolution when Napoleon interrupted travel. By the 1840s, railways were established, and lithographs were sold at all holy vision sites such as Lourdes, France, in 1858 and Fatima in 1917.

There were two kinds of woodcuts. The first technique of woodcut was the relief print that appeared with black lines. After the drawing was complete, the cutter would remove the undrawn areas from the block. Then the block would be inked and printed. The other technique was called white-line (wood engraving), dotted manner, or crible' prints. In white-line the background is left, and the lines defining the image are carved away. Also, there was a difference in the direction of the carving. The black-line technique was cut in the direction of the wood grain, and the white-line technique was cut against the grain, therefore, showing very little evidence of grain. It was this innovation of engraving that evolved the metal plates used in engraving today.

Although the antique playing cards and religious icon cards were a form of printmaking, they were created for a purpose not just for "art's sake." Printmaking was a means of communication both for the illiterate and for the educated. However, in the beginning of

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[1]Ibid., p. 13.

the fifteenth century, metal engraving and drypoint were becoming rapidly known. These new techniques brought an awareness for an artistic touch in printmaking. No longer were the images simple and crude. More observation of the subject matter was evident. Details, shadows, lights, and darks were in high contrast. After all, this was in the height of the Renaissance, and the enlightenment of man was apparent.

Engravings have been around since man was able to scratch into a surface and leave grooves. It was about twenty years after the Van Eycks perfected oil paints that the densely black oily pigment was created. Rich handsome paper, strong-bodied black pigment, and burnt plate oil were the materials that allowed the engraver's designs to travel through the early cumbersome presses, making visible in a new way the expressive images created by the anonymous masters of the burin and, later, of the needle.[1] The process of engraving was more expensive. Techniques, supplies, and equipment were much more advanced and time-consuming than the woodcut.

Albrecht Dürer was perhaps the first true artist of printmaking. He was a German painter, engraver, and designer. Dürer was among the first original creative artists who influenced generations in northern Europe. Although he is one of the most recognized printmakers of the Renaissance, he did not invent the engraving technique,

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[1]Ibid., p. 113.

nor did he invent drypoint. His contribution to the world of print-
making was to take these techniques to their fullest and most advanced
stages. Dürer had a love for the ancient world and a deep Christian
background. It was a combination of these characteristics and influ-
ences of the Italian painters, in conjunction with the customs of his
homeland, that made him one of the most noted of printmakers.

The Housebrook Master, perhaps being Erhard Reuwich of Utrecht
who illustrated the Pilgrimage to the Holy Land, was the inventor of
drypoint. His technique was unlike the metal shops engravers. Where
as in engraving one removes the metal, in drypoint one is deflecting
metal up out of the grooves into flanking ridges. The technique of
drypoint creates a fuzzy print when inked until the press flattens
the burrs created from the stylus needle. Limited editions come from
this technique of intaglio printing. Dürer was using drypoint tech-
nique by 1512, having been inspired by Housebrook Master's works. By
the 1850s, copperplates could be electroplated with iron to reinforce
the burr which made drypoint more commercially rewarding because it
would last longer.

Great silversmiths of Florence and Bologne decorated their
engraved metal with a process called niello, a process which engraved
parts by oxidizing the grooves with sulphur. The image would then be
very accentuated. In the fifteenth century, goldsmiths were frequently
more respected than painters. It was the goldsmiths and silversmiths

who turned to intaglio printing first; the painters followed after the success was apparent.[1]

Martin Schongauer (1445-1491) was a German printmaker. He was born about the same time that engravings were first being printed. Schongauer signed his work MS., and his subject matter was mainly saints and the New Testament. He was among the first to move the copper plate on a hard leather pillow by pivoting. This technique gave him rhythmic lines. At Schongauer's death, Dürer was nineteen years old, and Michelangelo was fifteen years old. Michelangelo was a pupil of Schongauer. Even though the late 1400s were considered to be in the Renaissance, Schongauer's best work reflected the attitude of the Middle Ages. His most renowned work was the engraving of Bedeviling of Saint Anthony. This one print alone inspired not only Dürer and Michelangelo, but much later artists such as Jerome Bosh and James Ensor.

While Schongauer influenced Michelangelo as a student, Andrea Mantegna (1431-1506) was also influencing young artists. Mantegna inspired the artist of Italy as Schongauer did for Germany. Both men brought engraving to a height of excellence that was followed for several centuries. There were more great engravers, such as MarcAntonio Raimondi (c. 1480-1530), Lucas van Leyden (1489/94-1533), and Albrecht Dürer (1471-1528), who brought

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[1]Kristian Sotriffer, Printmaking: History and Process (New York: McGraw-Hill Book Company, 1968), p. 58.

northern and southern Europe together with their talented techniques of engraving.

Although the art forms of woodcuts, wood engravings, drypoints, and metal engravings have been utilized to contemporary times, there were still more techniques and mediums to be invented and discovered. At the beginning of the sixteenth century, a new medium, that of etching, began to emerge. However, it did not take full force until the seventeenth century. The technique of etching used a chemical force rather than the physical force of the printmaker. Acids were used to break through the metal plates. In the medieval days armors were etched. Some say the original idea and name came from the armor designers. The etched design on the armor was sometimes transferred to paper by rubbing ink into the lines and pressing paper on top of the image. The paper then revealed a reverse image from the etched armor.

Carl Zigrosser and Fritz Eichenberg, both authors on print-making, have stated that Daniel Hopfer (c. 1493-1536) is credited with the invention of etching. Hopfer did the first known etching, a portrait of Konrad von der Rosen. Although this has been said of Hopfer, both authors agree that the glory should be shared with Urs Graf. Urs Graf did the earliest dated etching, 1513.[1]

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[1]Carl Zigrosser, Six Centuries of Fine Prints (New York: Covici-Friede Publishers, 1937); and Fritz Eichenberg, The Art of the Print: Masterpieces, History, and Techniques (New York: Harry N. Abrams, Inc., Publishers, 1976).

Since etching was started in the early 1500s, various changes in the technique in use of materials occurred. Etchers used iron plates at first, then later discovered how easy copper was bitten by the acid. Later in the 1650s aquatint and mezzotint were invented in Amsterdam. Aquatint was popular for its watercolor tonal wash affect. Jan van de Velde was the inventor of the advancement of the materials used in the process.

Although Dürer is one of the most noted printmakers of all times, he only made about five or six known etchings. Etching was not his medium, but he passed his knowledge on to Lucas van Leyden in Antwerp. Lucas combined the technique of etching and engraving in the famous portrait of Maximilian I. The fine hair lines of etching were the technique that pushed engraving aside.

There are many noted etchers; among the first and one of the most innovative was Jacques Callot (1592-1635). He was a mass productionist. More than 1400 prints are attributed to him. Callot helped expand the technique of etching by improving the ground from the old hard waxy ground to the lute-maker's tough varnish of mastic and linseed oil. He also invented the échoppe, a steel cylinder honed to a slant at the end.[1]

Perhaps, because of his day and age, Callot illustrated two of his most famous works: The Fair at Impruneta and his series

[1]Mayor, Prints and People, p. 456.

Miseries of War. He lived in the perilous times of the French
Revolution. Because of the invention of the échoppe and the devel-
opment of new subject matter (war), new possibilities opened for
the world of printmaking.

One of Callot's pupils was Abraham Bosse who took the
technique of etching even further. He wrote a book of formulas for
etching, including the formula for the ground that Callot established.
The book was translated into Dutch, German, English, and Italian.
"Bosse's book reduced the graver to a finishing tool for smoothing
transitions in etchings so that after about 1675 'engravings' differ
from 'etchings' in style, not technique. (Pure engraving did not
return until the 1920s in Paris and then only for expressive open
calligraphy.)"[1]

> Etching is the noblest of graphic techniques; the artistic
> medium that allows the most varied modes of expression and
> at the same time gives the freest possible rein to the
> imagination.[2]

In correlation with this statement, Kristian Sotriffer also
states that Rembrandt Harmenszoon van Rijn was an etcher who has
never been surpassed by his achievements with the medium. While
other etchers of the seventeenth century were drawing first and
then transferring their drawings to the plates, Rembrandt was

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[1] Ibid.

[2] Sotriffer, Printmaking: History and Technique, p. 100.

experimenting with freehand spontaneous application on the plate.
He believed in reworking the plate into phases or degrees of lines.
Sometimes he engraved on the plate to further the richness of the
lines.

Rembrandt used the soft ground of Callot, the dramatic use
of light and shade from Italian painter Caravaggio, and the dynamic,
senuous, muscular forms of the Flemish painter Rubens. The most famous
works of Rembrandt are his portraits. However, his religious works
were very dramatic and very popular. Fame in one's own lifetime is
rare especially for an artist, but Rembrandt achieved recognition for
his work and became wealthy for it. Then tragedy hit his family. His
wife, daughters, son, and second wife all died before him, and poverty
and loneliness struck this once highly praised artist. In later
years his landscapes of nature were his subject matter. Perhaps the
out-of-doors took him away from the inevitable mundane existence of
his last years. Rembrandt died virtually unknown.

There were other artists of the seventeenth century besides
Callot and Rembrandt. Peter Paul Rubens established his workshops
in Antwerp. He, with a number of artisans, achieved an assembly line
effect to produce his Baroque paintings, drawings, and designs for
decorative schemes. Anthony Van Dyck was Rubens' contemporary and
associate and was known for his portraits of famous people and a
wonderful draughtsmanly quality.[1]

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[1]Ibid.

Another printmaker who carried etching even further was
Hercules Seghers. His work was so far ahead of his day and time that
he could not give his prints away. Seghers was the first to tint
the paper before printing and the first to color the etching after
printing. His prints were too experimental for the appreciation of
the people. Although the general public was not impressed with
Seghers' work, Rembrandt was influenced by Seghers' big bold lines
and used them in his own work.

Intaglio printmaking had developed into a bountiful art form
by the eighteenth century. Many printmakers were noted for their
outstanding talent and technique. Mixed media was becoming a creative
and expressive form. There were still those printmakers who carved
the relief blocks and engraved plates, but new techniques and modern-
ization were pushing the old methods aside. Some of the printmakers
incorporated several techniques together such as engraving, etching,
mezzotint, aquatint, tinting paper, watercolor over prints, burnishing,
multi-color inks, and/or reverse etching.

Many European countries contributed to the printed art form,
especially Italy and England. In Italy there were four prominent
printmakers: the Tiepolos, Canaletto, and Piranesi.[1] The Tiepolos,
Giovanni Battista and his son Giovanni Domenico, were noted for their
great delicacy and active empty space. Canaletto was dedicated to

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[1]Saff and Sacilotto, Printmaking: History and Process,
p. 105.

representation of light and color. Piranesi, perhaps the most dedi-
cated of the Italian printmakers, is remembered mainly for his series
Carceri (imaginary prisons). It was Piranesi's work that later
influenced Fransico Goya.

In England the Georgian period was in progress. William
Hogarth was one of the new satiric humorists and he depicted the
middle class of the eighteenth century. His most noted works were
The Rake's Progress, The Harlot's Progress, and Marriage a la Mode.[1]
Another Englishman who was considered a greater draughtsman than
Hogarth was Thomas Rowlandson. Rowlandson devised a faster production
method of etching the design himself and then turned it over to pro-
fessional "washers" to finish. He depicted all levels of society,
both in satire and lewd eroticism.

The two most dominant printmakers of the eighteenth century
were William Blake (1757-1827) and Fransico José de Goya y Lucientes
(1746-1828). Blake was from England, and Goya was from Spain. These
men are compared in similarities of their ingenuity. As Blake's
contemporary, Goya also used the intaglio medium as an expressive
source. However, Goya did accomplish notoriety by being the first
Spaniard to be recognized by the art world as a printmaker.

William Blake began his printmaking career at the age of
fourteen. His first and most important apprenticeship dealt with

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[1]Ibid., p. 107.

copying the medieval tombs in Westminster Abbey. From these drawings
of tombs came a certain unique quality of light-willowy people who
looked as if they could hardly lift the weight of their garments.
It is also an accepted fact that Blake studied Michelangelo's muscle
men to aid in the swirling body movements of his prints. Blake's
work was not appreciated in his own lifetime. It was not until the
late nineteenth century in the Art Nouveau era that Blake's work
was revitalized and recognized.

Blake was a unique genius who devised his own method for
intaglio printmaking:

> Blake made his plates into a relief, the whites being
> etched more deeply. In order to avoid the necessity of
> etching the works backwards, he seemed to have devised a
> process whereby the words were written in an acid-resistant
> medium on paper and then transferred to the surface of the
> plate probably rolling the paper onto it with a heated
> roller. The sticky medium would adhere to the plate and
> the paper could then be soaked away. In the same medium
> the artist would then add his illustrations directly to
> the copper plate with either pen or brush.[1]

Besides using his unique way of printing, Blake often used different
colors of ink and applied watercolor to his prints. Gold was also
used frequently. These added techniques gave his prints the appearance
of the illuminated manuscripts of the medieval days. In conjunction
with his prints, Blake wrote poetry. His work constantly wanted to

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[1]Ibid., p. 108.

combine the natural with the supernatural, the real with the imaginary, and the soul with the body.[1]

Only one other man could compare with the ingenuity of Blake, and that was Goya. Goya created his prints to show the corruption of the Spanish monarchy. He was a court painter and had first-hand observations relating to the difference of the rich as compared to the poor. His series Los Caprichos shows the corruption and is some of the most devastating political satire ever created by a print-maker. It was during this time that Goya, forty-six years of age, had a nervous breakdown that rendered him deaf. In 1799, after a rest and recuperation, Goya emerged again and learned the technique of aquatint. Goya's greatest achievement was the innovation of using aquatint as an expressive medium, rather than just a technical trick.

With the turn of the century, Goya became disenchanted with his world. France invaded Spain in 1808. Goya expressed the horrible disaster of the war in the eighty etchings of Desastres de la Guerra (Disasters of War). These etchings were not published until thirty-five years after his death. This series has been compared to Callot's Miseries of War.

In the beginning of the 1800s came a new medium called "lithography." Goya was seventy-nine years old when he created his first lithographs in the year 1825. The subject matter was the

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[1]Ibid., p. 107.

bullfight. Hyatt Mayor, author of Prints and People: A Social History of Printed Pictures, says this about Goya:

> Like Dürer, he began in one world and ended in another. But while Dürer refashioned himself in the likeness of an art that already existed, Goya groped his way into the central drift to come.[1]

Goya was a highly sensitive man who was able to transfer the travesties of life into magnificent forms of expression through printmaking. He lived long enough to teach his children and grandchildren. Goya was abused, suppressed, and finally exiled. It was not until his death and a new regime that his great talent was understood.[2]

Lithography was discovered at the end of the eighteenth century. No other new methods for making prints had occurred in almost three hundred years. All of the various forms that had been used were being mixed up and turned around to suit the needs of the printmaker. Of course, the techniques of wood blocks, etchings, engravings, etc., continue to this day. By the beginning of the nineteenth century, printmaking was being ruined by reproductionists and overuse by less technical methods. So with the discovery of a newer, less expensive medium, the art world would be stimulated again.

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[1]Mayor, Prints and People, p. 630.

[2]Saff and Sacilotto, Printmaking: History and Process, p. 110.

The nineteenth century was also very busy with the different schools or movements of art. In one hundred years, there was Classicism, Romanticism, Realism, Barbizon, Impressionism, and Post-Impressionism.[1] Before this century, artists fashioned themselves from the styles of art, and then all of a sudden, like a preindustrialization movement, the artists fashioned the styles to suit themselves. With a faster pace, that was a foreshadowing of the twentieth century, new discoveries were constantly being made from the old ones. New techniques and combinations of new and old were being explored in order to satisfy the hunger of the artist and his pocket book. It was in the experimental stage for a cheaper way to reproduce the image that lithography was discovered.

In the 1790s in Munich, a young actor-playwright, Alois Senefelder (1771-1834), discovered the lithograph process. He was too poor to have his work published, so he was exploring less expensive ways to reproduce his work himself. The surface he was using was Kelheim limestone (Bavarian Limestone). Senefelder kept the stones highly polished. The polished surface reminded him of the copper plates he would have learned to use. He needed to learn how to write in reverse script, so he used the stone for practicing instead of paper, which was more expensive. Quite by accident one day, a laundry woman needed a list from his mother. He realized that there was no paper and that the writing ink had dried up.

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[1]Zigrosser, Six Centuries of Fine Prints, p. 104.

Next to the freshly ground stone was his prepared ink of wax, soap, and lampblack, so he wrote with the ink onto the stone and intended to copy it later to paper. Then with diligent curiosity he applied some nitric acid to the stone, as an etcher to copper plate. Next he wetted the stone and inked it. With much surprise, he observed that the stone only took the ink where the greasy ink had been placed. Eventually this discovery developed into the process of "lithography."[1]

At first lithography was called "polyautography" or "chemical printing." These terms meant they were relief and intaglio processes on stone. Later after more developing occurred and the process had been clearly defined, the name lithography was given. Lithography is a Greek word meaning "stone writing." This classification also gave a new category for printmaking, planographic.

Senefelder was his own chief promoter for his invention. He also devised a press that allowed the paper to slip through without being moved on the stone. In Munich around 1800, Senefelder acquired a patent for his "chemical printing."[2] Along with his associate Phillip Andre, he commissioned a well-known artist to try the new technique of lithography. From this they produced a series of

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[1]Sotriffer, Printmaking: History and Technique, p. 95.

[2]Saff and Sacilotto, Printmaking: History and Process, p. 184.

lithographs called <u>Specimens of Polyautography</u>, published between 1801 and 1807. The artist they commissioned was American born Benjamin West.

Lithography soon spread to other countries. (The French brought out many technical developments of this medium through the artists Gericault, Delacroix, and most importantly Daumier.)

> Theodore Gericault (1791-1824) was one of the first artists to obtain a colorful textural effect with chalk lithography, a technique which he used from 1817. Eugene Delacroix (1798-1863) made his first experiments as early as 1814. Like Gericault, he evolved a looser style in lithography and painting. This departure from the rigid dictates of classicism earned him the repute of a "liberator of li-thography." His most famous works are the illustrations to Goethe's <u>Faust</u> and to <u>Hamlet</u>.[1]

Honoré Victorian Daumier (1808-1879) was the most prolific of any artist, especially printmakers. He produced more than 4000 lithographs. Daumier developed the art of caricature to the height of perfection. Like Goya, Daumier lived during a time of unrest and development of the middle class. Goya's art depicted the horrors of war and Daumier's caricatures depicted the civil unrest of the country. Daumier's fame started with the weekly publication of <u>Le Caricature</u> that sometimes offended the King himself. In the year 1835 the publication was forced to cease. Later, in the year 1848, a new daily paper, <u>Le Charivari</u>, was published.

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[1]Sotriffer, <u>Printmaking: History and Technique</u>, p. 98.

In the 1860s, Edouard Manet and Edgar Degas both displayed Japanese influence of design in their lithographic work. Manet scratched through the litho crayon directly onto the stone. Degas used a three step method that resulted in a painterly quality from lithography.

The latter 1800s produced many artists in the realm of printmaking, especially lithography. New techniques were constantly being invented instead of drawing directly on the stone. Edgar Degas and Rodolphe Bresdin used a method of transferring their image from metal plates to stone. Degas used lithographic transfer paper that pressed against the stone after it was pulled from a copper plate. Bresdin would sometimes etch a plate and then transfer it to stone. A younger artist influenced by Bresdin was Odilon Redon. Redon was among the first artists to attempt creating dream images with the medium of printmaking.

Edgar Degas, however, worked with several printmaking media. Constantly experimenting and striving for perfection, Degas revitalized the monotype of the seventeenth century, used photography, aquatint, etching, lithography, and classic Japanese woodcuts. He influenced Mary Cassett who was a close friend. Mary Cassett joined the impressionist movement at the age of twenty-one and developed the Japanese influence to a greater extent than Degas. Her subject matter dealt with "women and children engaged in everyday domestic

activities."[1] Still another late nineteenth century artist and print-
maker was James Abbott McNeill Whistler. Besides using his extensive
talents for paintings, Whistler was known for his picturesque prints
and he was among the first to use the "process of steel facing, whereby
the surface of a plate is strengthened through the electrolytic
adhesion of a thin layer of iron to the copper."[2]

Japanese artists such as Harunobu, Utamaro, and Hokusai had a
significant effect on the artists of the nineteenth century. Harunobu
made dream girls drifting like smoke past the exact geometry of a
lattice or a balustrade.[3] His work is considered to be the last
original creation of Eastern art. Utamaro was studied by Whistler,
Degas, and Cassett. Art Nouveau was in the latter decades of the
nineteenth century, yet the greatest contributors of the style came
from the eighteenth century Japanese printmakers. Hokusai was probably
the greatest of the influences. It was the swirling freeform movements
of the watercolors and woodcuts that transmitted to the Western print-
makers. Styles of printmaking as well as other forms of art work
displayed world wide influences. At the end of the nineteenth century,
the boundaries of the world were closer; Eastern lifestyles influenced

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[1]Saff and Sacilotto, Printmaking: History and Process,
p. 112.

[2]Ibid.

[3]Mayor, Prints and People, p. 698.

Western lifestyles, and it was apparent that the turn of the century was going to abound with creativeness from the accumulation of the past.

CHAPTER II

AN INTRODUCTION TO THE HISTORY OF
ART EDUCATION SINCE 1900 A.D.

Industrialism and mechanism of the late 1890s brought on the great change of the twentieth century, both in social-economics and in Art Education as a creative experience. The industrial revolution was to enable people to have an easier way of life and allow more leisure time to appreciate the "finer things." Education has tried to improve one's lifestyle, to understand his environment, and to have a greater awareness of his social capabilities. As the industrial world of labor was changing at the turn of the century, the art world changed. The school of "Expressionism" evolved. Artists such as Matisse, Rouault, and Derain in France and John Marin in America led this movement. Society as well as Art Education began the idea and concept that each person has capabilities of individual expression. Though the industrial revolution changed the course of living for the world, so did the new school of the expressionist change the concept of teaching art.

Influences on Art Education, besides regular education, are social sciences, advances in technology, and the intellectual development in American society. While the intellectuals of this era were

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creating the self expression theory in teaching art, the already
accepted way was very formal. The formalized way of teaching art was
based on Art Appreciation. This was to teach children to understand
beauty. In order to produce this appreciation, "picture study" was
created. As late as the 1920s, art teachers were still using pictures
of the old masters rather than the modern contemporary artists of
their day.

> "Picture Study in the Grades," wrote its author Oscar Neale
> in 1927, "aims primarily to develop in the children of our
> school an appreciation of the great masterpieces and so
> that their ideals may be influenced by the patriotism, the
> sympathy, the courage, the piety, and the beauty which the
> great artists of different ages have given the world."[1]

Even as late as the 1940s, art teachers were more concerned with
picture narrative taste rather than shaping their students' taste
with the more contemporary art of the day.

One man, at the turn of the century, had a profound effect on
Art Education--Arthur Wesley Dow, professor of Fine Arts at Columbia
University. He developed the elements and principles of art. There
were three elements: (1) line, (2) value, and (3) color. The
principles of art he employed were: (1) opposition, (2) transition,
(3) subordination, (4) repetition, and (5) symmetry. These elements
and principles were developed to enable the students to produce

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[1]David W. Ecker and Elliot W. Eisner, Some Historical
Developments in Art Education, ed. George Pappas, part I: Concepts
In Art Education (New York: The Macmillan Company, 1970), p. 17.

harmonious compositions.[1] In an annual book named <u>Art Education Today</u>, edited by members of the Fine Arts Staff of Teachers College, Columbia University, 1935, acknowledgement was given to Dow as a major contributor of Art Education. With the same note, Sallie B. Tannahill said,

> Arthur Wesley Dow was ever progressive, reaching out for better ways and new ideas. Since his going (1922), great changes have taken place in society, in education, in art itself. We, his students, cannot stand still. We must go forward to meet new demands to realize new hopes, to build new ideals.[2]

Dow was not alone in his efforts to formulate a way to teach and understand art. Walter Sargent, professor of Aesthetic and Industrial Education at the University of Chicago, was involved in the psychology of children's art at the same time Dow was developing his composition theories. Sargent had a conception that drawing was a language and a tool with which to think. In his books, <u>Fine and Industrial Arts in Elementary Schools</u> and <u>How Children Learn to Draw</u>, there were three factors that influence children to draw. First, the child must want to say something; second, the child uses devices to draw from; and finally, a child can learn to draw one thing well and

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[1]Ibid., p. 18.

[2]Sallie B. Tannahill, <u>Arthur Wesley Dow</u>, ed. Members of the Fine Arts Staff of Teachers College, Columbia University, <u>Art Education Today</u> (New York: Bureau of Publications, Teachers College, Columbia University, 1935), p. 36.

not others. Both Dow and Sargent had a profound effect on the twentieth century development of Art Education.[1]

There were two branches of psychology developing about the same time. These intermingled with Sargent's theories. One was German and the other English. The German branch had psychologists such as Fechner, Helmholtz, and Wundt and was based on the mental event and the mind. The English branch worked on the importance of natural observations and of the environment in shaping human behavior. Those scientists were John Locke, Charles Darwin, Francis Galton, and Herbert Spencer. These theories of application to education were in the air, so to speak, while Sargent was writing.

There were two major forces that influenced the first half of this century in Art Education: the writings of John Dewey and others from Sigmund Freud. G. Stanley Hall took these influences and wrote on children's development. In turn, his psychology affected John Dewey. Dewey believed man's nature was biological, as did Charles Darwin and William James. He based education on how man experienced his environment, which led to the level of intelligence of experience. After viewing schools in the late 1880s and 1890s, he was against formalism that prevented a free form of natural experience in learning. Expanding human intelligence was a process of education that offered physical,

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[1]Ecker and Eisner, Some Historical Developments in Art Education, p. 18.

emotional, and intellectual freedom for the student. Dewey's theory was a major factor of the twentieth century Art Education which led to the Progressive Education Association.

Again, we come back to the Expressionist movement of development in education. "Dewey's interest in helping educators provide for the uniqueness of the child and the significance of experience in his life grew into a movement which eventually considered self-expression and interference by the teacher an important tenet of its program."[1] By 1938, he wrote a book entitled Experience and Education. The book was designed to unlock the creative processes in children. At the same time, Art Education had at least expanded from not only "picture study," but to correct drawing and hand-eye coordination. The word creativity had not existed in the Art Education world before the twenties. Dewey helped the education world realize that children have a capacity for creative intelligence and that Art Education was a means by which they could develop it.

Others supported this trend of thought; Margaret Mathias, Bell Boas, Florence Cane, and later Victor D'Amico were among the supporters. They all believed that bringing out the creativeness of a child not only helped in art, but also helped education in general. If a child was free to express himself in art, then he could express himself in his everyday life of education. "Creative self-expression"

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[1]Ibid., p. 20.

was the new theory of Art Education that came from the late twenties, early thirties.

Besides using the "creative" process in art, it was used to assist teaching in other subject areas. It was a function to correlate, to help emphasize another subject area, to reinforce education through experiences. Even in today's Art Education, math, science, history, language arts, music, and more can be taught through art.

Still another view of Art Education was the developmental theories of mental health. Freud helped back this as a form of therapy. Basing this idea on the problems of growing up, art could be a release for a child or anyone else who could express himself through creativity where otherwise he might not be able to do so.

These three ideas--self-expression, reinforcing curriculum, and therapy--gave new meaningful support for Art Education. All of these, including the old formal way of teaching art, continue to this day. If one would compare the industrial revolution to the expressionist movement, add up the wars, depression, and new moralities of 1900 through the 1930s, one would realize things have not changed much. The major changes in education occurred during this era of history. It could be called an awakening to the human individual.

All developments in Art Education since the thirties have not changed much or have been various interpretations. As the years have gone by, recognition of the modern artists and modern idioms have been acceptable. However, one of the most noted changes developed because

of the writings of Viktor Lowenfeld. Art Education stayed away from or seemed blind to all that was happening during the Post-impressionist, Faves, Cubists, and Expressionist movements. It was not until the late forties that Art Education changed from its Neo-Victorian attitude. Finally the influence of the modern artists, along with the efforts of Dow, Dewey, Darwin, Hall, Sargent, and eventually Lowenfeld, started a new type instruction of Art Education. Modern art had found its way into the curriculum of public schools finally by the fifties.

Creative activity and self-expression gained new meaning in the late forties and early fifties because of Viktor Lowenfeld. There were several reasons why Lowenfeld was significant in American Art Education. First, he laid down psychological foundations of the way children develop in art; second, he defined much of teaching during the progressive era; and third, his system became one of the major psychological ways in which art teachers were trained. He was concerned with the mental and creative growth of the child and saw art as a means of developing this. He wrote two very significant books, The Nature of Creative Activities[1] and Creative and Mental Growth.[2] These books offered a careful scholarly enquiry to the field of Art Education.

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[1]Ibid., p. 23.

[2]Viktor Lowenfeld and W. Lambert Brittain, Creative and Mental Growth (New York: The Macmillan Company, 1970).

Lowenfeld was as effective on Art Education from the forties to present day as Dow was from 1900 to the 1930s. Both men were professors in major universities and their efforts in developing a better format for Art Education was passed down through their followers and students. Their job was to educate educators of the future. As Lowenfeld and Dow are recognized so has been Dewey. In Coming to Our Senses, compiled by a panel report, David Rockefeller, Jr., Chairman, mention of "progressive education" and the writings of John Dewey attribute him as a major contributor to the first twenty-five years of this century. This panel perceived ". . . what ever else, the first real concern for children's natural interest and talents, with an obvious corollary that self-expression could lead to an opening-up of receptivity to all forms of artistic creation."[1]

In Part I of Concepts in Art and Education, section on "Foundation," Viktor Lowenfeld explains and defines self-expression. He says,

> It is not expression of thoughts and ideas in general terms
> of content. Self-expression comes from not the "what" but
> the "how." Understanding the medium in which to express
> oneself is important. Such as education toward truth is one
> of the highest and deepest meanings of self-expression. The
> development toward freedom of expression, this great experi-
> ence of individuals in finding themselves rests upon the
> knowledge of what truth is in art education. This knowledge
> cannot be achieved without a thorough study of what we can

[1]The Arts, Education and Americans Panel, Coming to Our Senses (New York: McGraw-Hill Book Company, 1977), p. 40.

expect in modes of expression in the different age groups
and on the different mental levels.[1]

In yet another article written in Art Education Today (1949-1950),
Lowenfeld wrote Must a Teacher Produce Creativity?. He says the
psychological insight of the teacher in this developmental stage
of the child and his creative activity is of utmost significance.[2]
Lowenfeld's definition of Art Education, from the standpoint of the
child to the creativeness of a teacher, can be summed up in this
statement:

> If children developed without any interference from the
> outside world, no special stimulation for their creative
> work would be necessary.[3]

Over the decades, support for the arts, in general, in the
public schools has depended on the social-economic status of our
country and the world. Since the turn of the century and the be-
ginning of our country, the Fine Arts have only flowed free during
times of relief. As stated earlier in this brief analysis of the
history of Art Education, wars, depressions, and the awakening of

[1]Viktor Lowenfeld, The Meaning of Creative Activity in
Elementary Education, ed. George Pappas, part I: Concepts in Art
and Education (New York: The Macmillan Company, 1970), p. 56.

[2]Viktor Lowenfeld, Must a Teacher Produce Creativity?, ed.
Members of the Fine Arts Staff of Teachers College, Columbia Uni-
versity, Art Education Today (New York: Bureau of Publications,
Teachers College, Columbia University, 1949-1950), p. 11.

[3]Lowenfeld, The Meaning of Creative Activity in Elementary
Education, p. 53.

human expressionism demanded changes in our educational systems. In recent decades, we have had the Vietnam war, deep recession, the prospects of zero population growth, changing of lifestyles and sexual mores, crisis in public confidence stemming from Watergate, and an increasing concern for the environment. This will only repeat a greater need for the freedom of self-expression which will be stiffled again for the ever concern for the "basics" in education rather than the arts in education.

A quote from John F. Kennedy:

. . . art means more than the resuscitation of the past; it means the free and unconfined search for new ways of expressing the experience of the present and the vision of the future. When the creative impulse cannot flourish freely, when it cannot freely select its methods and objects, when it is deprived of spontaneity, then society severs the root of art.

> The Late President's Last Reflections on the Arts
> (Saturday Review, March 28, 1964)[1]

Another quote taken from an article written by William F. Russell:

Once upon a time--and not so long ago--we were not particularly worried about the future. What form the government might take, what change there might occur in business, industry, or what developments there might be in society gave us as little concern as whether the sun might rise or not.

But the Great Depression has shaken our confidence. We are informed that we are living in a period of surpassing change; that we are passing one of the great milestones of history; in fact, that the Industrial Revolution which we thought we had survived is now only beginning to be fully

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[1]The Arts, Education and Americans Panel, Coming to Our Senses, p. 47.

upon us. In short we are told that we are entering upon a New Social Order.

This is very confusing, for no one informs us what this New Social Order is to be. We hear talk of collectivism, state control, and a planned society. The winds of oratory blow from right to left. Some look to the future through rose-colored spectacles, some through blue, and some through red. All do not see alike, and prophets disagree.

But there is one method by which we can predict the future. We can study the way in which we live today. Then we can concentrate upon a few of its important elements and study how they came to be. Thus we can note the trends from past to present, and to use a mathematical expression, project these lines of development into the future. This gives us a good basis of estimating what will be.

When we do this we can predict that we are coming to a time when fewer people will be at work. Youth will remain at school until a later age. Retirements will come earlier. Working hours will be shorter. Holidays will increase. We can guess, because of technological developments, that when workers will be at work there will be greater tension and greater speed. Life will be the alternation of periods of work furious and fast with periods of leisure.

These periods of leisure will constitute at once the greatest peril and the greatest opportunity of the New Social Order. They may become the temptation to vice and excess. They may become the opportunity for the Good Life. Upon how this opportunity is accepted will depend our national survival.

Thus Art and Art Teaching hold a place of paramount importance in the future. In the Middle Ages, those in terror of the future secreted themselves behind battlements and walls and hid themselves in caves. In this day and age, those in doubt could well prepare to become teachers of games and plays, teachers of drama, and particularly teachers of art, for no other branch of knowledge of skill will fulfill so important a need or offer so certain an opportunity. Whatever our form of government may become, whatever trend the New Social Order may take, artists and teachers of art will be needed.[1]

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[1]William F. Russell, Art and the Future, ed. Members of the Fine Arts Staff of Teachers College, Columbia University, Art Education Today (New York: Bureau of Publications, Teachers College, Columbia University, 1935), p. 1.

CHAPTER III

BASIC PRINTMAKING PROJECTS THAT CAN BE USED
ON THE MIDDLE SCHOOL LEVEL

Objectives of Printmaking:

1. To acquire a greater appreciation for prints and printmakers.

2. To increase vocabulary of art.

3. To have a greater understanding of two-dimensional concepts.

4. To create an appreciation of the image making process through different methods of printmaking.

5. To have self-satisfaction for creating and completing an image making process.

6. To have a greater understanding and appreciation of the environment through the image making process.

7. To experience different media, tools, papers, inks, with various techniques of printmaking.

8. To increase awareness of the six basic elements of design: color, line, shape, space, value, and texture.

9. To have a greater understanding of the history of printmaking by working the basic original techniques of the old masters.

FOUND OBJECT PRINTING

(An Experimental Discovery)

Introductory Project for

Printmaking

Suggested for All Levels.

FOUND OBJECT PRINTING

(An Experimental Discovery)

Materials: Optional Choices

Stones	Sponge
Pot cleaners	Cardboard tubes
Cookie cutters	Bottom of egg carton
Rubber stove mats	Sticks
Pastry brushes	Shoes
Vegetable graters	Combs
Sandpaper	Screen
Files	Fabric
Metal dies	String
Wooden handles	Nails
Scraps of wood and metal	Buttons
Crumpled paper towel	Leaves
Scissors	Grasses
Erasers	Flowers
Wallpaper	Tree bark
Pencils	Seed pods
Ink bottles	Clay
Cardboard	Paper clips
Mathematical instruments	Ruler
Lace	Onions
Doily	Cabbage
Apples	Pears
Potatoes	Grapefruit
Celery	Carrots
Shells from nuts	

Ink: Watersoluble or oil base
   Tempera paint with cornstarch
   Tempera paint with Prang Media Mixer

Charging Plate: For ink

Brayers: Various sizes, various hardnesses

Palette Knife: Ink

Paper: Various colors and textures

Newspaper: Protection on table

FOUND OBJECT PRINTING

Found objects for printmaking must consist of a relief surface. Relief printmaking involves recessed texture. Ink will be applied to the outer surface edge, and that part will be printed. Found object printmaking makes the students more aware of their environment through texture and gathering objects around them for printing.

Procedure:

Step 1: Have students gather found objects outside of the classroom. The larger the number of objects obtained the better the variety and the greater the possibilities are for creative discovery.

Step 2: Prepare working area. Spread newspapers for protection of table tops. Arrange printing equipment in an appropriate position--charging plate, brayer, inks, barens, found objects, or whatever else is needed for a successful printing session.

Step 3: Prepare printing papers. Cut a variety of colors, textures, and sizes. Have paper ready for printing in bulk form. (Found object printing production goes rather fast and it is best for the creative experience to have plenty of expendable paper.) This project does not need the best or most expensive paper due to the mass production of the students. Save the best papers for later, and use the found

object prints for future reference towards more advanced printmaking projects.

Step 4: Each student should clean and dust the found objects. Vegetables and fruits need to be cut. (Be ready for the juices.) Potatoes might need a little encouragement to create a relief surface. None of the found objects should be changed or altered for that is not the purpose of the project.

Step 5: Spread ink out evenly on the charging plate. Use a brayer to spread ink. When ink is an "even-sticky film," it is ready to apply to the surface of the found objects. (Caution: the vegetables and fruits will be juicy, and the brayers of ink will slip. Sometimes the tempera paint with thickener or media mixer will do better.)

Step 6: Apply the ink to the found objects by rolling back and forth across the surface. When the ink looks and sounds thick enough to make an impression, begin printing. NOTE: Some inking of the found objects can be accomplished by stamping. Just hold the object and place directly onto the ink that is on the charging plate. Ink usually adheres to the surface of the object, and one is able to make an image on the printing paper.

Step 7: Actual printing can be accomplished by using a press, baren,
stamping, rubbing by hand, or any means available. It can be
suggested to the students that they might invent a method for
pressing the objects to the paper for printing.

Step 8: Drying space must be available to hang a number of prints to
dry (clothesline), and a space must be provided for prints to
dry flat (tempera paints or vegetable juices are too runny to
hang).

Example: Plates I and II show examples of students working
on found object printing.

Plate I

Plate II

MONOPRINT

(Introducing Printmaking)

or

(Creating Spontaneous Design)

Suggested for All Levels

MONOPRINT

(Introducing Printmaking)
or
(Creating Spontaneous Design)

Materials:

Printing Plate: Smooth non-absorbent surface--such as a table
top, piece of glass, or linoleum block

Charging Plate: Smooth non-absorbent surface

Ink: Watersoluble or oil base
Tempera paint with cornstarch
Tempera paint with media mixer

Brayers: Medium to soft rubber

Paper: Various colors and textures

Press: Baren, wooden spoon, or palm of hand

Objects for the image making in the ink can be anything that is
firm and can be manipulated by hand: cardboard, pens, pencils,
erasers, rulers, crumpled paper, etc.

Newspaper: Area protection

Clean-up: Depends on watersoluble or oil base ink being used

MONOPRINT

Procedure:

Step 1: On a flat smooth surface, mark off a specific size space with masking tape. This area will be the printed plate. A piece of linoleum may be used if available.

Example: Plate I shows the taped area.

Step 2: Have paper large enough that when placed over the print plate area there will be a cleared margin around the specified space.

Step 3: Spread ink out evenly on the charging plate. Use a brayer. When ink is an "even sticky," it is ready to apply to the print plate surface area. The ink must be an "even sticky" on the plate area also.

Step 4: To make a monoprint from the inked area, an image must be made. In order to make the image on the planographic surface, special objects must be selected to scrape, smear, scratch, and even to remove some of the ink. Students can use numerous items such as cardboard, rulers, pencils, fingers, hands, soles of shoes, anything immediately available. After the ink has been applied to the plate surface, quickly take the chosen object and mark in the ink. Moving the object different ways will create an image to print. The image can be pure design or a drawn picture. Create the image as quickly

as possible; the ink must not dry. NOTE: The image will be reversed when printed.

Example: Plates II and III show applying ink to plate surface.

Plates IV, V, and VI show the image making process with objects.

Step 5: Place paper centered over the wet image and press. Rub gently with the fat part of the palm, a baren, or a wooden spoon. When the paper is saturated with the ink or the paper looks like it has absorbed the ink, peel the paper up by the corner with one hand; with the other hand hold the opposite corner so the paper will not slip.

Example: Plates VII and VIII show rubbing of paper.

Plates IX, X, XI, XII, and XIII demonstrate pulling paper away from plates.

Step 6: Hang the wet printed paper to dry. When the print has dried, a spray of clear acrylic may be applied for protection. Protection of the prints is needed especially when water-soluble ink is used.

Example: Plates XIV and XV show examples of finished monoprints.

Remember, a monoprint only prints one of a kind. The inked surface plate will have to be reworked and reinked with each printing. No two prints will be the same.
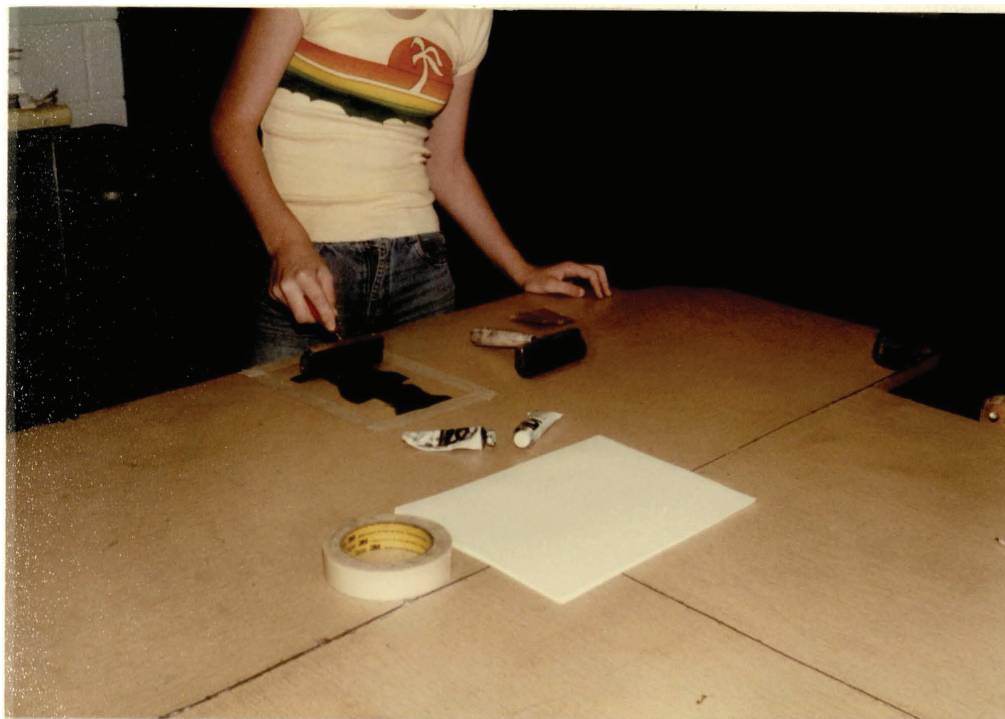
Plate I

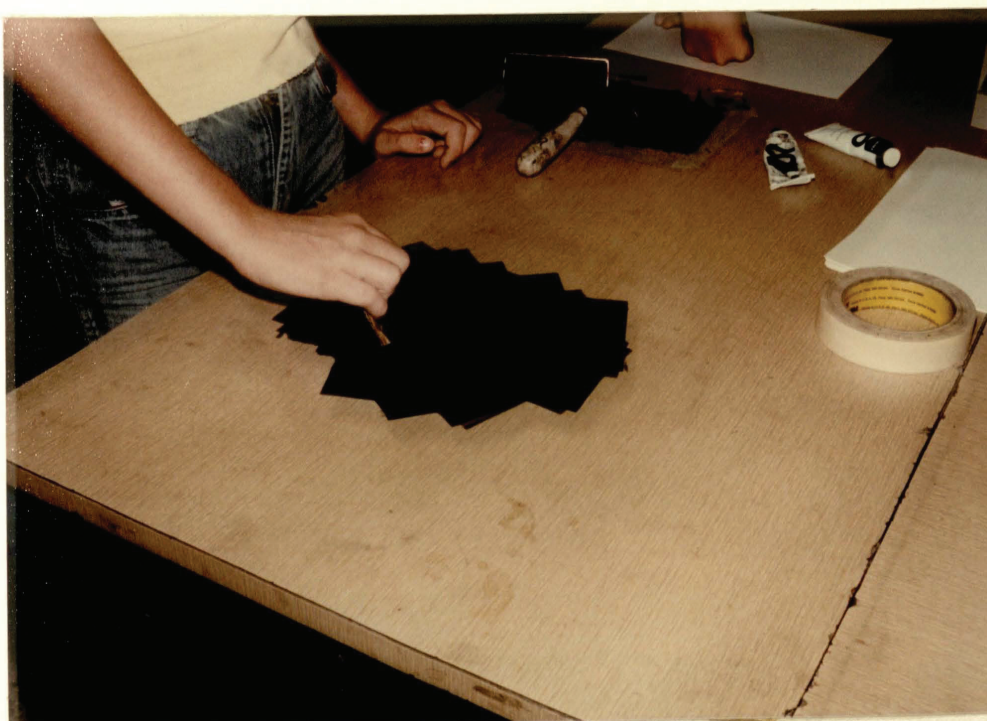Plate II

Plate III

Plate IV

Plate V

Plate VI

Plate VII

Plate VIII

Plate IX

Plate X

Plate XI

Plate XII

Plate XIII

Plate XIV

Plate XV

MONOTYPE

(Introducing Printmaking)

or

(Creating Spontaneous Design)

Suggested for All Levels

MONOTYPE

(Introducing Printmaking)
or
(Creating Spontaneous Design)

Materials:

Printing Plate: Smooth non-absorbent surface--such as a table top, piece of glass, or linoleum block

Charging Plate: Smooth non-absorbent surface

Ink: Watersoluble or oil base
Tempera paint with cornstarch
Tempera paint with media mixer

Brayers: Medium to soft rubber

Paper: Various colors and textures

Press: Baren, wooden spoon, or palm of hand

Objects for the image making in the ink can be any pointed objects such as pencile, pens, map colors, or metal stylus

Newspaper: Area protection

Clean-up: Depends on the use of watersoluble ink or oil base

MONOTYPE

Procedure:

Step 1: Same as Monoprint.

         Example: Plate I.

Step 2: Same as Monoprint.

Step 3: Same as Monoprint.

Step 4: After the ink application has been prepared, place the center of a sheet of paper over the wet inked area. Press gently, just enough to have the paper adhere to the ink.

         Example: Plates II and III.

Step 5: Take an instrument such as a round leaded pencil, ballpoint pen, or stylus and begin to draw on the backside of the paper. Press firmly with the instrument, hard enough that the ink will be impressed on the paper. Make sure the instrument chosen can slide easily over the paper without tearing it, and make sure that nothing else touches the paper before the drawing is complete. The pressure of the instrument will help pick up some of the ink in the wide open spaces of the drawing. The pressure pick-up should only add texture and value to the monotype.

         Example: Plate IV.

Step 6:   Same as Monoprint.

    Example: Plate V.

Remember, a monotype is the same as a monoprint in that they both are one of a kind prints. Their techniques vary.
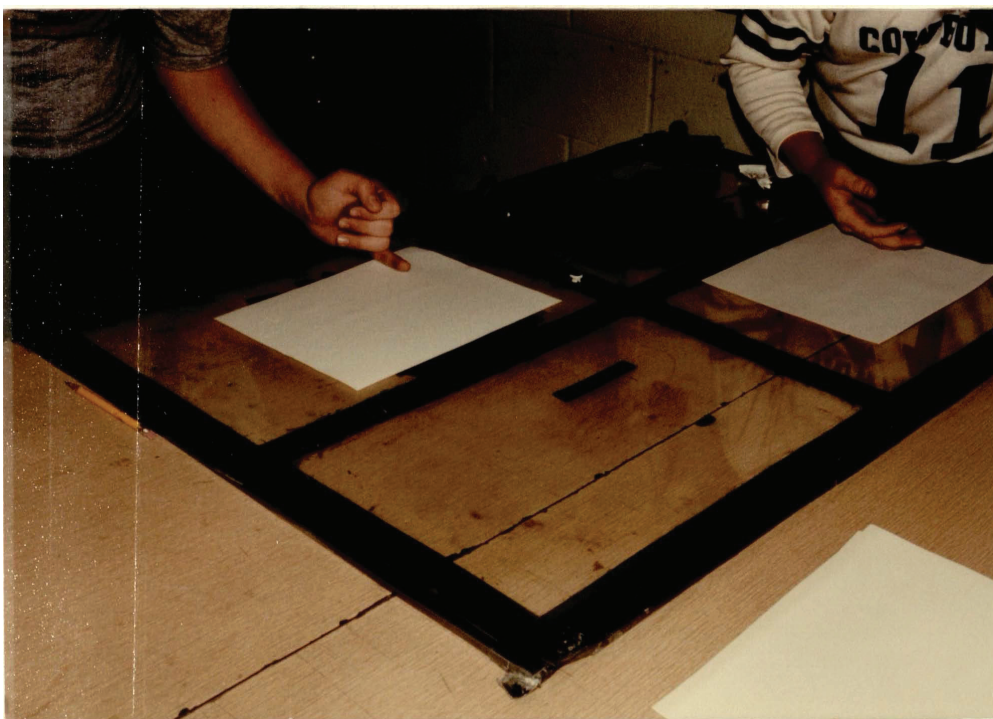
Plate I

Plate II

Plate III

Plate IV

Plate V

CHALK MONOPRINT

(Mixed Media)

Suggested for Secondary Level

CHALK MONOPRINT

(Mixed Media)

<u>Materials</u>:

Chalk or Pastels: Soft texture and bright colors

Paper: White preferred

Pencils: Round lead or ballpoint pen or other instrument for
          tracing

Ruler: Measuring

Printing Plate: Cardboard or scratch foam (both to be cut to
                 specified sizes)

Mat Knife for cardboard or Scissors for scratch foam

Charging Plate: Smooth non-absorbent surface

Brayers: Soft rubber

Ink: Watersoluble or oil base (black preferred)

Spray: Acrylic or shellac (to seal cardboard for ink and/or to
        protect finished work)

Newspaper: Protecting working surface

CHALK MONOPRINT

Procedure:

Step 1: Take one sheet of clean paper. Draw a rectangle about 4 X 9 inches centered on one side of the paper. In order to have the exact same rectangle on both sides of the paper in the same place, trace through to the back.

Step 2: Draw a picture or design in one of the rectangles. Fill the rectangle to the edges making each line complete a space. Turn the paper over, and trace the design or picture to the backside space.

Step 3: Use soft chalk or pastels to color in one side. (Bright colors are preferred.) Be careful not to smear on the outside of the rectangle.

Example: Plates I and II show students applying color to their drawings. Note the drying line in the background in Plate II.

Step 4: Cut cardboard or scratch foam slightly larger than the rectangle. If using cardboard, a spray shellac or clear acrylic is needed to make the cardboard non-absorbent. The scratch foam should not be sprayed, or it will melt. It does not matter which one is used; just remember they have different textures. Experimentation may be needed to achieve the proper effect. The cut pieces of cardboard

or foam are considered the plates. Each student should have his own individual plate.

Step 5: Place ink on charging plate. Use brayers to spread the ink evenly on the slab. When the ink has an "even sticky" sound and texture, then it is ready for applying to the cut plate. When the plate has the same "even sticky," it is ready to print.

Example: Plate III shows the students charging the plates.

Step 6: After charging the plate with ink, very carefully place it face down on the colored chalk rectangle. Turn both the plate and the paper over; do not allow them to slip. Without pressing on the backside with the hands, take a ballpoint pen, a rounded lead pencil, or any instrument that will slide easily over paper and trace over each line of the image from the backside. Press firmly, but not hard enough to tear the paper. After all lines have been traced over, slightly rub and press over entire rectangle area. This helps pick up excess chalk and gives a textural effect on the print.

Step 7: After the printing process has been completed, quickly pull the corner of the paper and peel it away from the plate. Do not allow the paper and plate to dry together. Hang the print and allow to dry. Drying time depends on the kind of ink used. Due to the chalk method, it is advisable to spray

the finished work to prevent smearing. Waterproof spray is
suggested especially if watersoluble ink is used.

Example: Plates IV, V, and VI show finished chalk monoprints.

Plate I

Plate II

Plate III

Plate IV

Plate V

Plate VI

CARDBOARD RELIEF PRINTING

Suggested for Secondary Level

CARDBOARD RELIEF PRINTING

Materials:

Cardboard: Double layered, thick, undamaged, smooth, no dents

Mat Knives: Exacto blade no. 11

Rulers: Wooden and/or metal--12 inch and/or 36 inch

Mathematical Instruments: Compass, protractor, right angle

Pencils and Erasers

Carbon Paper

Tape: Masking

Scrap Paper: Sketches and proofs

Printing Paper: Various colors and textures

Ink: Watersoluble or oil base

Charging Plate

Brayers: Soft, various sizes

Presses: Baren, wooden spoon, rolling pin

Drying Area: Clothesline

Sealing Agent: Liquid or spray, shellac or acrylic

Newspaper: Protection for work areas

CARDBOARD RELIEF PRINTING

Procedure:

Step 1: Use some scratch paper and begin sketching ideas for the relief cardboard print. Consider that the cardboard will yield three appearances--stripes, solids, and voids. These three appear according to the way the student cuts and peels the cardboard. Remember, with relief printing any part cut away or out will not print. The cardboard printing method is excellent for teaching geometric shapes and designs. Students can also draw pictures as long as they draw big and bold. Due to the medium, cardboard cannot successfully produce small delicate detail. Also remember that the cardboard plate can be cut up into pieces therefore changing the direction of the stripes and/or adding multicolor printing. Have each student draw a square or rectangle shape for the perimeter of their design. Because the cardboard plates have to be cut from large sheets and cost is minimal, sizes of the prints are unlimited. When the decision for the sketch is made and the size of the design has been determined, transfer the design to the cardboard plate.

Step 2: Place a large sheet of double layered cardboard on a cutting area. Measure and arrange each student's sketch perimeter. With a yard-long ruler and a pencil, draw the various sizes

of students' work on the large sheet of cardboard. It is convenient to have each line side by side. After the cardboard sheet is covered with as many plate perimeters as possible, cutting may begin.

Step 3: Use a sharp blade for cutting the cardboard. It is most important that the cardboard is not smushed or torn on the edges. The use of a metal ruler is helpful in cutting long pieces of cardboard. A metal ruler gives support and helps guide the mat knife as it pulls across the cardboard.

Step 4: Have each student cut a piece of carbon paper; make the carbon paper the same size as the sketch perimeter. Hold the sketch and the carbon paper together with the sketch on top. Make sure the carbon paper is face down on the cardboard, or it will not transfer. Place the two papers on the cardboard plate and tape slightly at each end so the papers will not slip. Use a pencil or ballpoint pen to trace over all the lines of the sketch, pressing firmly. After all lines have been traced, lift one end of the papers up from the cardboard to see if the sketch has transferred. If all lines are transferred, then remove the sketch and carbon paper.

Step 5: Each student should be assigned a knife to cut the design in the cardboard plate. Care should be used in explaining safety procedures. Specific rules should be given and understood.

The danger of such a tool can be confined to a minimal if everyone realizes the outcome of carelessness. Begin cutting by outlining each shape. If an area of the cardboard is to yield stripes, only the outer-most layer should be cut. After the stripe area is outlined with the knife, then the top layer of cardboard can be peeled off. If the shape is cut properly through the top layer, then the stripes will remain in contact. Sometimes extra scraping and cleaning of the corrugation is required to make the stripes more clear. If an area is to be a void space that will not receive any ink, then the cardboard should be cut through the first layer of corrugation. When the void space areas have been traced and cut with the knife, peel the outer layer and the corrugated layer away. Solid spaces that will receive ink should be left alone. It is very necessary that the solid spaces are not smushed or punched. Any indentation will not receive the ink and can change the overall effect of the print. Remember, do not cut through to the bottom layer of cardboard. The second layer is the base support for the plate. Example: Plates I and II show cutting cardboard.

Step 6: Cardboard is very absorbent. In order to prevent ink from saturating it, a sealing agent must be applied. Sealing the cardboard can be accomplished by one of two ways--spraying or brushing. Shellac or acrylic are both excellent for

sealing the cardboard. Convenience and availability will determine the choice between spraying or brushing and shellac or acrylic.

Example: Plate III shows spraying.

Plate IV shows ready to print.

Step 7: Place ink on charging plate, and spread it out evenly with a brayer. When the ink has an "even sticky" sight and sound, begin applying it to the cardboard plate. At first the cardboard plate will soak up more ink than most forms of plates, even after the sealing agents have been applied. Apply as much ink as it takes to ready the plate for printing. When the ink seems to have the "even sticky" texture, try the first print. Repeat the inking process after each printing. Work as fast as possible to prevent drying of the inked cardboard.

Example: Plates V and VI.

Step 8: Printing the plate can be done two ways. One way to print the cardboard plate is to place the printing paper over the wet surface of the plate and press evenly. Another way to print the cardboard plate is to pick it up and turn it over onto the paper for printing. Either way is permissible. Cardboard is not a hard durable medium therefore the plate would be squeezed flat in a press. In order to make the

inked plate have a good contact with the printing paper, different methods must be tried. A baren, wooden spoon, rolling pin, larger brayer, and/or the fat part of the palm are a number of choices for presses for cardboard printing. Whichever one is most convenient will do. Each print must be pressed and rubbed evenly over the plate the very same way each time. Peel the paper off the plate by one corner. Be careful and hold the opposite corner down while peeling the paper off. Do not wait too long or the paper will stick to the plate.

Step 9: Hang the prints to dry. Later, when dried, a spray of clear acrylic may be applied for protection, especially if water-soluble ink is used.

Example: Plates VII and VIII show finished work.

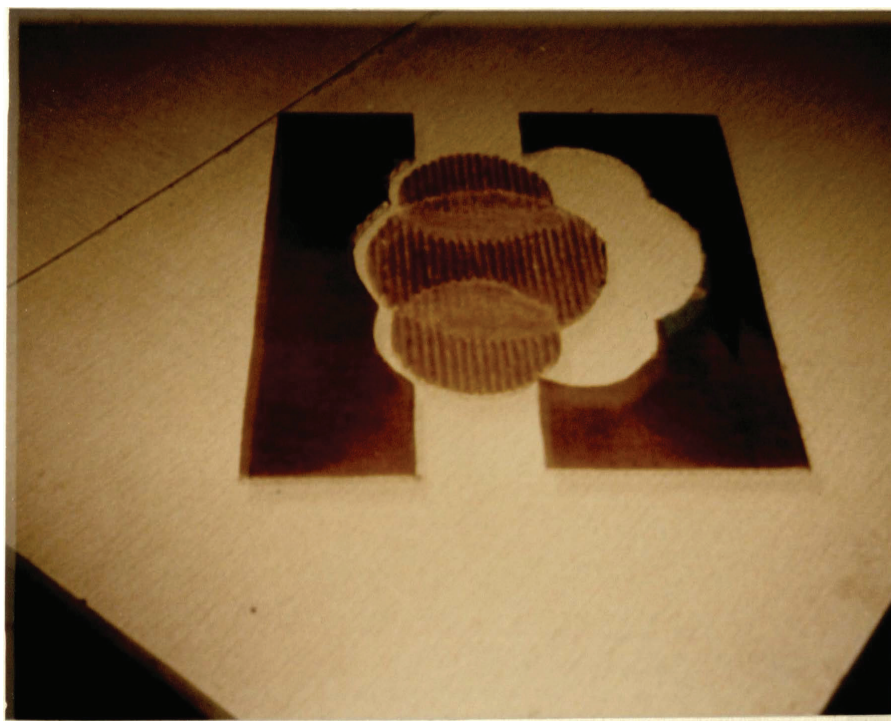Plate I

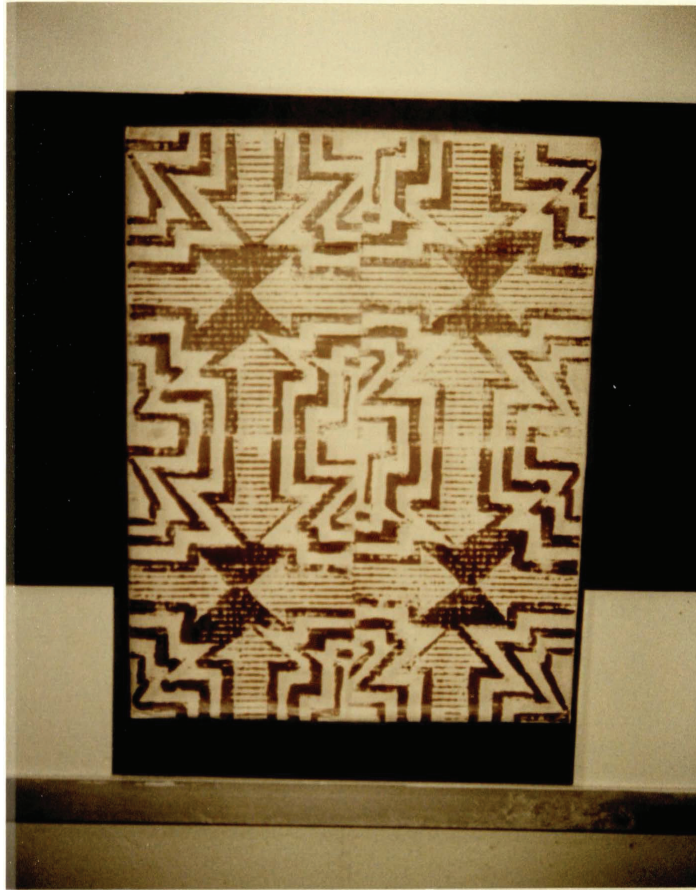Plate II

Plate III

Plat IV

Plate V

Plate VI

Plate VII

Plate VIII

LINOLEUM BLOCK PRINTING

(Textiles)

Suggested for Secondary Level

LINOLEUM BLOCK PRINTING

(Textiles)

Materials:

Linoleum: Sheets or pre-cut, pre-mounted blocks

Knives: To cut sheets of linoleum into blocks or special shapes

Gouges: Blades--Deep V, Deep U, Shallow-Wide U, Narrow U, and
         cutting blade
         Handles--to hold blades secure

Pencils: To draw sketches and transfer design to blocks

Carbon Paper: To transfer design to blocks

Paper: White butcher paper, large rolls, different sizes and
        colors--if a block printing edition is desired then
        speedball block printing paper is recommended

Tape: Masking--to hold carbon paper to sketch and design, to
       secure newspapers to working area

Ruler: 12 inch and/or 36 inch

Brayers: Soft rubber roller

Charging Plate: Smooth non-absorbent surface for ink distribution
                 to brayers

(All of the above is used for linoleum block prints on paper
such as editions)

Ink: Watersoluble--for practice patterns and easy clean-up
      Oil base--for actual printing on fabric for permanency

Fabric: 100% pure cotton, no permapress, pre-washed to remove
         sizing

Scissors: To cut fabric

Working Area: Large and flat

Newspaper:　Protection of work area and used for the ironing of the fabric (also used for batik)

Clothesline:　Use clothespins for hanging prints to dry, for hanging fabric to dry

Iron:　For setting the ink into the fabric (batik)

Clean-up:　Paint thinner for oil base ink, soap and water

Extras:　Treatments for fabric that can give added color, texture, and design

Erasers:　Art gum erasers, perfect for trim next to the linoleum block print, cut eraser with X-acto knife

Dyes:　Permanent dyes that will not wash out are recommended Procion dyes preferred (Imperial Chemical Industries and ICI America, Inc.), comes with materials and procedures needed

Batik:　Wax
Melting vat
Instruments for applying wax--brushes, tjanting tools, spoons, metal potato mashers, etc.

Fabric Paint:　Such as Versitex, permanent when set with an iron

Embellishments:　Buttons, beads, ribbons, patches, embroidery, anything that the student wants to add to his textile piece

Hard Sponges:　For textural stamping

LINOLEUM BLOCK PRINTING

Procedure: Can be used for single image block printing

Step 1: Each student should be given a piece of linoleum. Standardized sizes can be purchased, or the linoleum can be cut from 12 X 12 inch sheets. Sizes may vary with each design. Basically, it is less expensive with the sheet linoleum, rather than the standardized pre-cut blocks. The individually cut pieces can conform to shapes other than rectangles or squares. If desired, cut pieces may be glued to a separate piece of wood for stability, thus you have the "linoleum block."

Example: Plate I shows samples of linoleum.

(Eraser trim is explained in the next section.)

Step 2: Use scrap paper and have each student draw the exact same size of the linoleum on the paper. Several repeated spaces should be required. Each space should be filled with a different or varied design or drawing. A variety of ideas is better for the versatility of the creative process. The design chosen must be either symmetrical for a repeat pattern or a complementary pattern. The objective is to cover yardage of fabric, so the multiple printing must be precise in measurement. Remember, the linoleum block is a relief

form of printmaking. The designs presented by each student should show which sections will be cut away and which sections will remain to receive the ink.

Step 3: Transfer of the design to the linoleum can be done by several methods. One is to cut carbon paper the same size as the linoleum piece. Place the carbon paper face down on the linoleum. Place the chosen design on the top of the carbon paper. A piece of tape may be placed around the edges to secure both pieces of paper from slipping. Use a rounded pencil lead and press over the lines of the design. Be careful not to smear the carbon with hand pressure. When all lines have been traced, hold the top of the papers against the block and lift the bottom papers to observe the progress of the transfer. By allowing an edge to remain on the block, the papers can be lowered again in the same space and more lines can be transferred without blurring. When the transfer is complete, remove the papers from the block. Example: Plates II and III show transferring of designs.

Step 4: Cutting the design out of the block is possibly the most exciting part of linoleum block printing. At the same time, it can be the most dangerous due to the use of the gouges. Gouges are the tools used for linoleum cutting. They are very sharp. The five most common gouge blades are the Deep V, Deep U, Shallow-Wide U (background), Razor Blade,

and Narrow U shape for outlining. The set of five can usually be purchased together, including an interchangeable handle. However, individual blades may be purchased. Precaution must be used at this time. Gouges are very sharp and can make a terrible cut in human flesh. Safety rules must be issued and understood by each student. All gouges should be guided away from the student and his hands. In order to do that the student must hold the backside of the block with one hand and guide the gouge away with the other hand. There are also corner brace blocks that hold the linoleum block in place while being cut. This allows less tension on the student to hold the block. The corner brace block can be built by hand by the students. Brace the block and take the gouge by the other hand. Hold the round part of the handle in the cup part of the palm and extend the forefinger down the neck towards the blade. Use the other fingers to grip the entire handle. Begin the cutting process by tracing the outer edges of the design, using the Narrow U blade. Remember, with any relief printing process everything cut away from the design will not print. Everything left of the original surface will receive the ink and print. Precise control of the hand pressure is needed. Too much force and the gouge will slip across the linoleum and could ruin the design. Take the cutting process slow and easy. After the design has been

outlined, use the other larger blades to remove more area faster. The Shallow-Wide U shaped gouge is used mainly for background removal of large areas. Sharp precise edges can be cut with the knife blade. As the cutting process continues, the uses for the other gouges will be discovered.

Example: Plate IV shows cutting with gouges.

Step 5: Prepare a large working area that is as flat and smooth as possible for printing. Newspaper or other large sheets of scrap paper may be used to cover the surface. Sometimes several layers are nice because you can discard a messy layer at a time. Tape may be applied to the edges to prevent sliding. Place the charging plate, brayers, ink, spatula, and palette knife in an appropriate position on the working area. Make a space next to the charging plate for applying ink to the block.

Step 6: Squeeze or place a small amount of ink in the middle of the charging plate. Take the brayer and roll it forward and backward in the ink. Lift the brayer up each time at the end of the plate. Lifting it at each end will spread the ink evenly on the plate and the brayer. Try to keep the ink no wider than the width of the brayer, no longer than two and one-half times the width. This will prevent quick drying and waste of ink. When the ink has acquired an "even sticky" sound and look, it is ready to apply to the block.

Step 7: The brayer should roll across the block, just like it was on the charging plate, when applying the ink to the linoleum. Roll once or twice across the plate and transfer ink immediately to the linoleum block in the same repeating motion. Repeat again until the same "even sticky" look and sound is apparent on the linoleum.

Steps 1 through 8 can be followed and prepared for block printing editions. The main difference with the following procedures is textile yardage printing as compared to single image edition printing on paper. Printing on fabric in multiple repeated patterns is quite different, a little messier, and more time consuming. Janet Erickson, in her book Block Printing on Textiles, said, "By exerting varying degrees of ingenuity, elbow grease, and imagination one can block print with such different materials as rubber tile, plastic screening, plasticene, soft pine blocks, cork flooring, art gum erasers, styrofoam, and sponges."[1] This project has proved that with a basic knowledge of geometric shapes, symmetrical and asymmetrical design, and with proper equipment and working environment any middle school student as well as other levels can be successful.

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[1]Janet Erickson, Block Printing on Textiles (New York: Watson-Guptill Publications, 1974).

Step 8: It has proved successful that the linoleum blocks, erasers, or other image making plates be used first with practice sheets of paper. Cut paper in large pieces. Make sure the paper is large enough to give an exact idea for the repeating of the blocks. Ink the blocks for printing and place them on the paper. This practice session creates a "blue-print" pattern for the textiles. Have each student understand and completely become aware of the possibilities of the individual blocks. Make each student try different variations of the multiple printing so total satisfaction will be accomplished.

Example: Plates V, VI, VII, VIII, and IX show "blue-print" pattern practice sheets.

NOTE: Clean blocks and/or other block surfaces after each printing session. Watersoluble inks or tempera paint with thickeners is suggested for practice sheets (also excellent for edition projects in classroom). The watersoluble inks are usually cheaper and more expendable than the permanent oil base ones needed for textile printing. Clean-up is faster and less time consuming with water base inks.

Step 9: Quantity and quality of the textile being used depends on the preparation needed for the fabric. Unbleached domestic, pre-washed and no permapress, is the most commonly used and easily obtained fabric. However, 100% cotton no permapress sheets

can be used. Some students can acquire the sheet easier with less cost or purchasing. Dying, batiking, tie-dying, sponge stamping for texture, hand painting, or any other way of coloring the fabric may be desirable by some students before the printing process begins. Length of yardage depends on the final project to be completed (shirts, pillows, wall hangings, etc.).

Example: Plate X shows students applying wax for crackle dying or batik.

Plate XI shows fabric dying from tie-dying.

Plate XII shows students measuring fabric for shirt pattern.

Step 10: Blocks have been prepared, "blue-print" patterns have been created, and fabric has been prepared; now the printing of the textiles can begin. Prepare the working area as in Step 5. Spread the fabric out smooth and flat. Prepare the oil base ink and plates as in Step 6. Follow Step 7 for inking the block. Begin printing by applying the block to the fabric. Due to the yardage of multiple printing process, alternating spaces with alternating drying may work for some individual students. Most of the time the block can be placed on top of the fabric and the transfer of the ink to the cloth works from the pressure of the

artist (stamping). If the ink is too thick for mere physical pressure on the block, then a hand can be slipped under the block and fabric and reverse pressure can be applied directly to the fabric towards the block. If the textile area is small, the fabric can be picked up and a wooden spoon, baren, or press can be used. After completion of the printing session, hang fabric on clothesline to dry. Make sure there is enough space so that students' works do not overlap and touch.

Example: Plate XIII shows students applying blocks and erasers to pieces of fabric.

Plate XIV shows actual hand pressing of blocks.

Step 11: After the printed textiles have completely dried, ironing will be necessary for setting the ink in the fabric. Place some newspapers on a large flat table area. Position printed fabric on the newspapers, ink side up. Place one layer of newspaper on top of fabric. This layer will separate the direct heat of the iron and protect the inked surface of the fabric. Set iron on medium heat. When the iron is ready, place it on top of the one layer of newspaper and move it back and forth, taking the yardage a section at a time. Continue ironing until the fumes of the ink stop steaming. The object of the ironing, besides

setting the ink, is to remove excess oil from the ink.
Proper ventilation may be considered during this procedure.
After all the above procedures have been followed, complete
the textile project for which the fabric was designed.

Example: Plates XV, XVI, XVII, XVIII, XIX, XX, XXI, XXII,
and XXIII show samples of finished work--practice
sheets, clothing, pillows, and wall hangings.

Plate I

Plate II

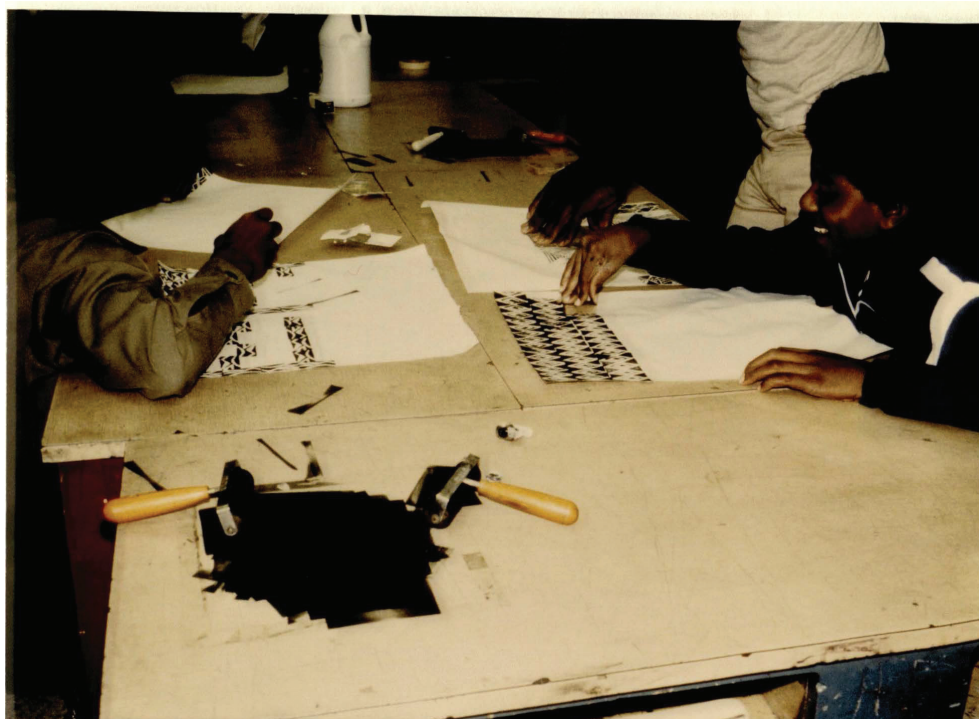Plate III

Plate IV

Plate V

Plate VI

Plate VII

Plate VIII
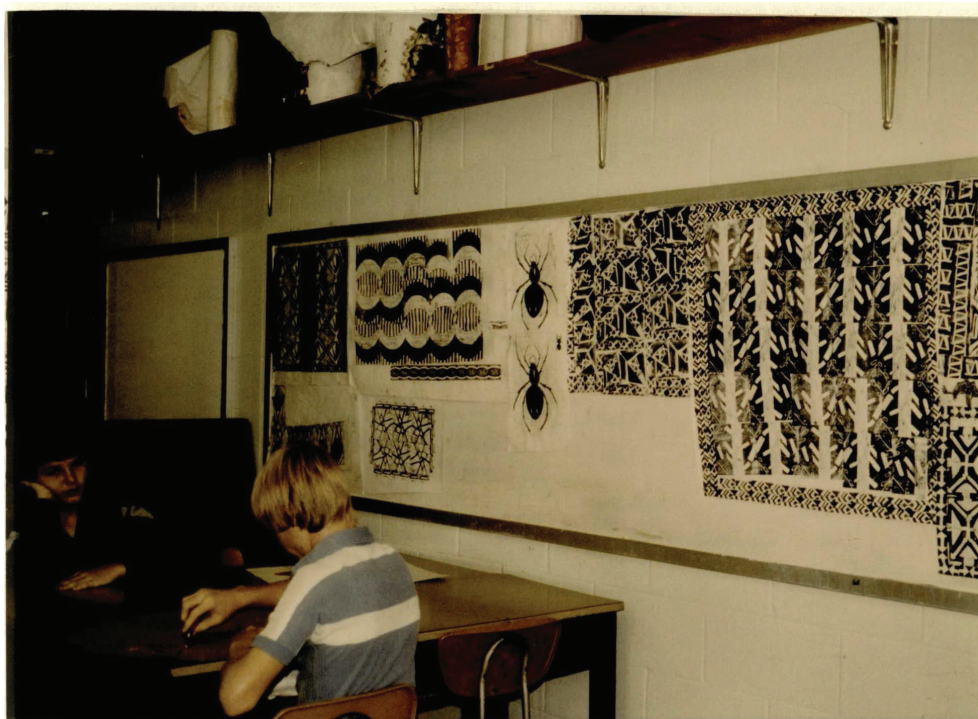
Plate IX

Plate X

Plate XI

Plate XII

Plate XIII

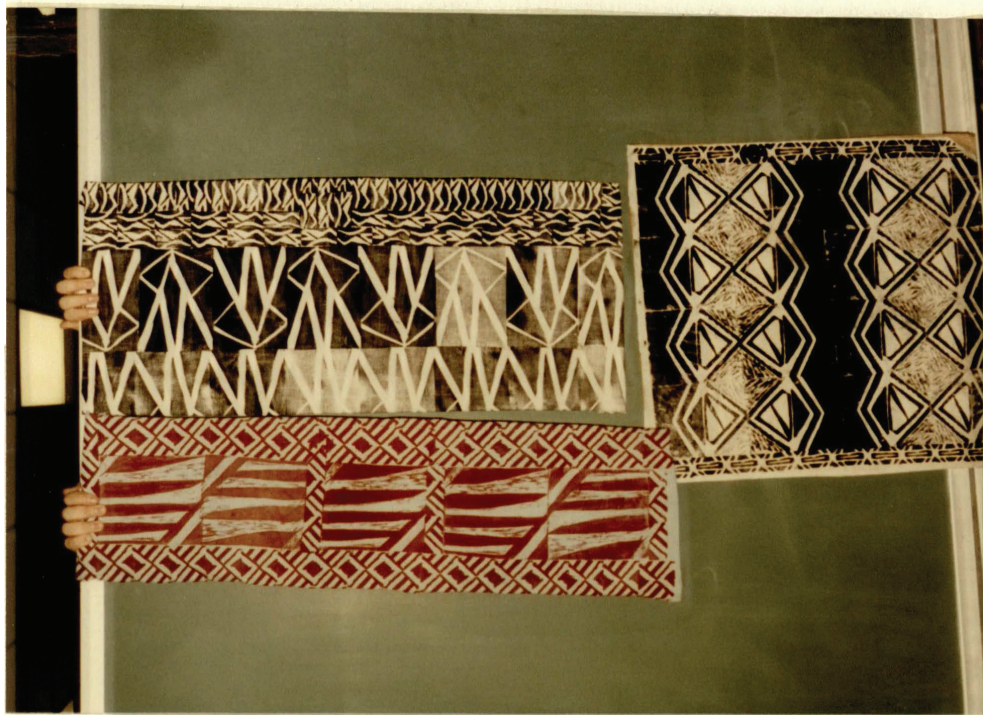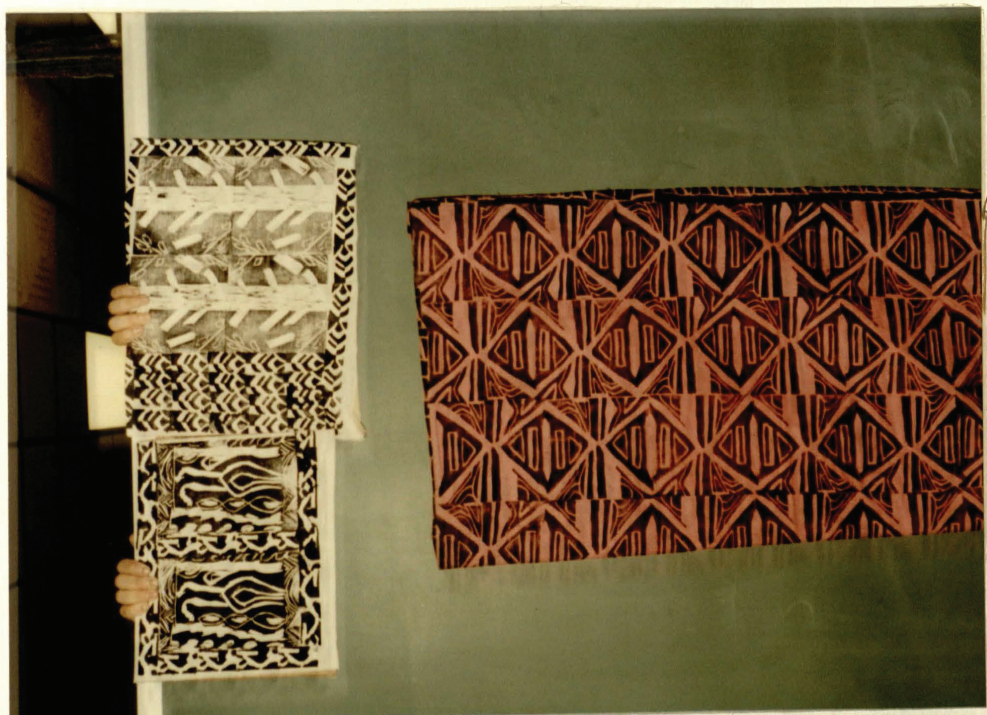

e XIV

Plate XV

Plate XVI

Plate XVII
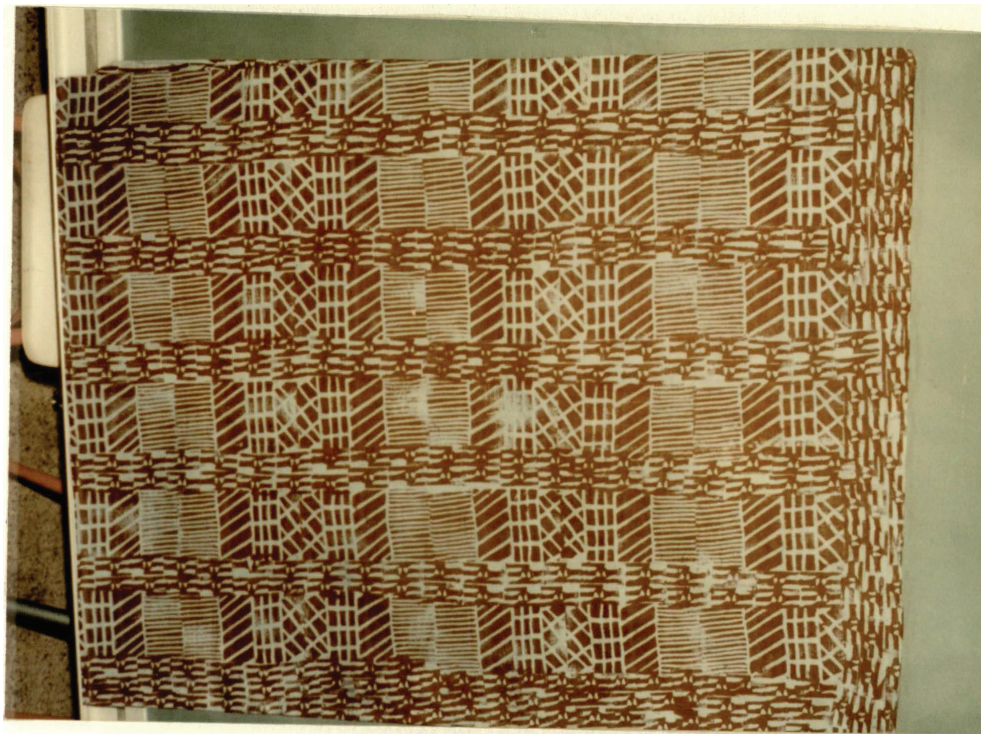

Plate XVIII

Plate XIX
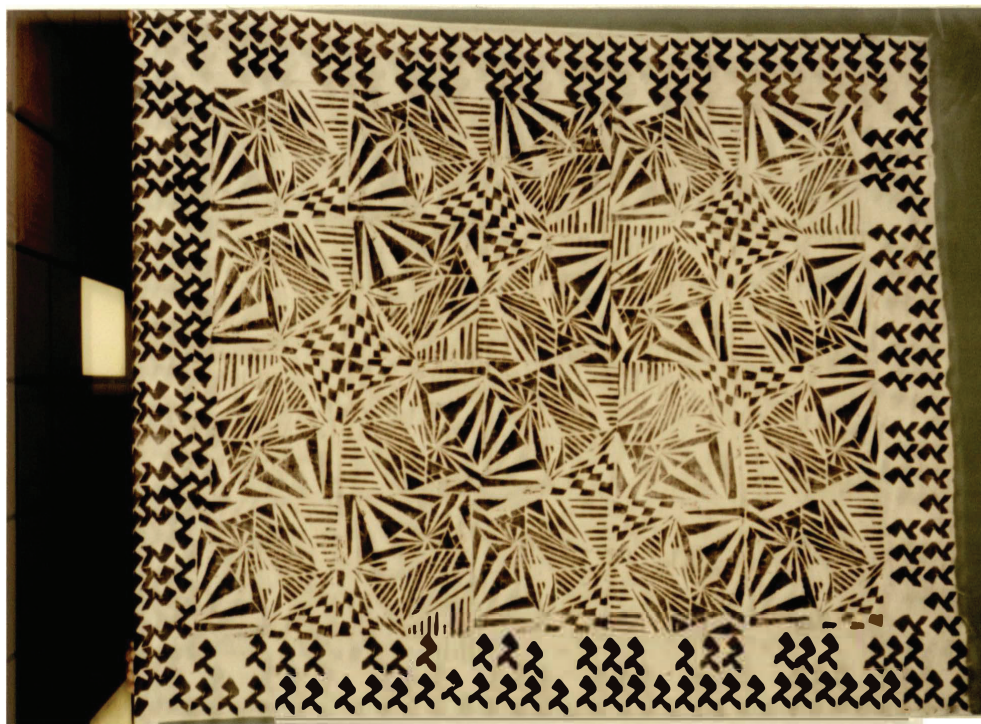

Plate XX

Plate XXI

Plate XXII

Plate XXIII

DRYPOINT

(Intaglio)

Plexiglas:

An Inexpensive Method

Suggested for Secondary Level

DRYPOINT

(Intaglio)
Plexiglas: An Inexpensive Method

Materials:

Plexiglas: Scraps in various sizes and shapes for the drypoint
plate

Stylus: Long metal tool used for its sharp point

Files: Rasping and fine textured

Sandpaper: Fine grit

Ink: Etchers ink or oil base printers ink

Dabber: Made of felt to apply ink to plate

Tarleton Cloth: To wipe place

Whiting: To remove ink from plate

Paper: Scrap paper--to cover metal bed of press and to use as
a cover sheet
Blotting paper--to absorb excess water from the dampened
printing paper
Printing paper--rag paper is preferred, speedball block
printing paper can be used
Newspaper--to cover working surfaces

Press: Roller press--two cylinders with a metal bed

Blankets: Felt blankets--one thin, one medium, and one thick

Tape: Masking

DRYPOINT

Procedure:

Step 1: Prepare the plexiglas plates by filing and sanding the sharp
edges. Rounded smooth edges will allow the plates to glide
through the press without tearing the paper or felt padding.
Care must be taken to prevent scratching of the plate surface.
This procedure would be the same for copper plates or zinc
plates used in the more advanced professional methods or
rather traditional methods of Intaglio Drypoint.

Example: Plate I shows filing edges.

Plate II shows sanding edges.

Step 2: Explain the technique of drypoint to the students. Remind
them that each plate will be drawn on directly with a stylus.
The whole process of drypoint is the actual image making on
the plate. Whereas in etching acid is used to make the lines,
in drypoint only the direct control of the artist's hands
using the stylus creates the curred grooves of the intaglio.
Each student should realize that the permanency of fine
details is more prevalent for the process of etching and
that the editions are endless. With the process of drypoint
the editions are limited because the pressing of the burred
lines of the plate disappear; therefore, drypoint cannot
hold up to long running editions. Each sketch should be

the same size and shape of the plate. (Plexiglas scraps come in a variety of thicknesses and shapes. If money is available for purchasing and specified cutting of plexiglas then the possibilities of size and shape are endless.) Due to the transparency of plexiglas, the sketch can be taped onto the back; and the students can trace the image on the front of the plate. Attention should be noted towards the effect of the drypoint. Make the students aware of the necessity of lines. The closer and more numerous, the darker the image will be.

Step 3: The sharp metal stylus is used to carve into the plate to create furrows or burrs. Burrs are essential to hold the ink. If the burr is deep and wide, the line on the print will be large and dark. When many cross hatching lines or many lines are close together then that area of the print will be dark or shadowy. Every person holds the pencil differently, and each printmaker holds the stylus much in the same manner as a pen or pencil. Unlike etching where the acid bites the metal, the drypoint artist must guide the stylus across the plate in order to make the image lines. Many unwanted scratches are created by beginners until control is accomplished. The depth of the lines depends upon

the pressure created by the artist. (Remember the drypoint technique creates soft lined images.)

Example: Plate III shows using stylus.

Step 4: Proofs are made for each stage of additional drawing for the completion of the image desired. Pulling proofs can help the printmaker actually see what line needs to be added. Beware, too many proofs can break down the burrs before the actual edition begins. One or two proofs should be enough. Professionally, each proof is labeled by the state number; example: Proof 1--State 1. This labeling should be placed in pencil just below the image. On copper plates or zinc metal plates, burnishing can be used to remove the unwanted lines. However, with plexiglas burnishing cannot be used. Therefore, flexibility should be advised. Be ready for extra lines to be incorporated in the original image.

NOTE: The following procedure is used for the actual method of printing the intaglio drypoint. The proofs are created by following this same process. By pulling proofs the student will learn the printing procedure.

Printing Process:

A. Dampening the Paper

The sizing and starch must be removed from the printing paper; therefore, soaking expensive rag paper takes about an hour. The soaking can take place in a pan of water. If the rag paper cannot be used, then the less expensive paper such as speedball printers paper is perfectly proper. The speedball paper does not need to be soaked. It can be slightly dampened just before printing with it. Blotters should be available for catching the excess water spots that might be left from the soaking and the dampening. There should be no water spots left, or they might repel the ink.

B. Inking the Plate

A dabber should be used to spread the ink thoroughly over the surface of the plate. Dabbers can be made by rolling thin felt together in a tight roll, tying it with string, and making sure the ends are perfectly flat, even, and smooth. The dabber is used in a circular motion in order to fill each burred groove.

Inks are important and should be chosen with the understanding of the medium. Etching ink is preferred or less expensive ink such as oil base printers ink can be used. (This project was done with etchers ink and speedball paper and was successful. The paper was dampened with a sponge just before printing occurred.) Apply ink with circular motion.

C. Wiping the Plate

In intaglio printmaking the plate is not inked in the same general manner as a wood or linoleum block. While blocks deal with the ink on the surface, intaglio printing plates deal with the grooves or incised lines. After the plate has been inked thoroughly, excess or unwanted ink areas are wiped off. A tarleton cloth is used for wiping or something similar in texture can be used. The cloth is folded flat on the bottom so the motion of the cloth does not remove the ink from the grooves of the plate. The amount of wiping depends greatly on the individual's idea of the image to be obtained. If one were to ink an intaglio plate and not wipe off the excess ink when the plate was printed, the image would be solid black with no contrasts. The wiping process allows the artist to create muddled grays, such as a mist in the air, by leaving part of the film. After the wiping of the heavy excess ink and the individual has accomplished a basic specification for the surface film, then an absolute white can be obtained by direct wiping with the hand. Whiting can be used to completely remove the ink from the surface of the plate. This will leave an absolutely clean area that will not print. Care must be made not to leave any excess powder of the whiting on the plate or build up will occur and the ink will print smudgy. Whiting can be applied with the fingertips,

Q-tips, or any extension that will hold the whiting and wipe off
the ink from the plate.

D. Press Used for Intaglio Printing

Intaglio printing presses usually have a metal bed that moves
through two rollers. Adjustable pressure is required for the
varying degrees of thickness of plates and blankets. An even
unbroken motion should complete the pull of the print. If a
proper press is not available, then other improvised methods can
be alternatives; one is a wringer washer with a metal bed, and
one is a platform created with boards and the wheels of a car.
Pressure is the key word. Some presses, usually the more pro-
fessional ones, use over 10,000 pounds of pressure. Most of the
average schools cannot afford such advanced presses. Whatever
press is available, adjustable pressure must be tested correctly,
or the blanket, plates, and paper will and can be destroyed.
Testing the pressure can be done with a dampened piece of paper
on an uninked plate, blankets placed on top, and pulled through
the press. If the plate has made an embossed image on the paper,
the pressure is correct.

NOTE: Place a clean piece of dry paper on the bed of the
press to protect it from the ink and dampness of the printing
paper. The plate will go on top of the bed paper.

Example: Plate IV.

Blankets that are used between the top of the plate and the cylinder of the press are usually felt. With professional intaglio printing, there are usually three blankets. The blanket closest to the plate is thin, and its textural quality has a direct effect on the print. The second and third blankets are used for support and cushion. The second and third blankets are thicker than the first. If availability of materials is a problem, then one blanket will do. It is a must to have at least one medium thickness for intaglio printing.

E. Pulling the Proof

Place a clean sheet of paper on the metal bed. Center the inked plate on the bed paper, inked side up. Take the pre-soaked blotted printed paper, hold it by the corners, and lower it over the plate centering it as you go. Take another sheet of very thin paper and place it over the printing paper between the plate and the blanket. This can be done if all three blankets are not available. Have the blankets already between the cylinders of the press. (This would already be done because of the pressure adjustments.) Lower blankets or blanket gently down over the papers and plate. Be careful not to disturb anything already down on the bed of the press. Stand free of any obstacles that might hamper the motion of the arms. Turn the handle of the press with an even unbroken motion. Do not stop in the middle

of the motion, or there will be a crease in the paper and the print will be ruined.

Example: Plate V.

When the metal bed has cleared to the other side, raise the blankets backwards and up, carefully.

Example: Plate VI.

Pull the protection paper off. At the corners pull the printing paper up without dropping or moving it side to side. Take the drypoint print to a board to be taped down to dry. (Because the paper was dampened, it will tend to dry curled up unless it is taped to dry flat.) The pull should be successful. If it is not, then recheck all the previous processes. Try to correct the mistake before the next pull. Proofs are pulled to understand visually the exact image the plate will create. Whether the plate requires more wiping, more drawing with the stylus, different paper, different inks, or simply learning which areas of the plate should be wiped for the desired effect, each proof should be marked, labeled, and noted.

Step 5: Repeat all of the preceding procedures to print a complete edition. The only difference from the proof as compared to the edition is that there is no changing of the plate. Each run is completed like the previous one. An edition of fifteen or twenty is an excellent amount for drypoint.

NOTE: Cleaning the plate after each pull is not necessary unless
there is a smudgy build up of ink and whiting. The plate should be
cleaned when the printing session is over.

Plate I

Plate II

Plate III

Plate IV

Plate V

Plate VI

LITHOGRAPHY

(Lithography Without the Stone)

"Litho-Sketch Kit"

Manufactured By:
Anthony Ensink and Company
400 West Madison Street
Chicago, Illinois 60606

Suggested for Secondary Level

LITHOGRAPHY

(Lithography Without the Stone)

This project was an experiment to explore the media of lithography. It was to introduce to the students the wonderful possibilities that this media could offer. The lithographic process is created with a ground smooth stone block. Due to the lack of funds and availability, the required Bavarian limestone was unobtainable. Pondering on the subject of how one could teach a planographic style of printmaking called lithography without a stone was answered by ordering a kit from a catalog company. "Litho-Sketch" was the name of the kit and it had all the supplies needed including the directions and examples. The basic premise of lithography is "oil and water resist" and the kit served its purpose in teaching this basic idea. However, the results were not as successful with the paper plates that were substituted for the limestone blocks as the finished lithographs did not have that overall graphite quality that the limestone texture produces.

The following photographs demonstrate Year II eighth grade art students preparing the "Litho-Sketch Kit."

Example: Plates I and II show students drawing on the paper plates with litho-crayons, litho-pencils, liquid tusche, and litho-markers. Notice the cover sheet

in Plate II which prevents the oil from the
student's hand from getting on the plate.

Plate III shows completed drawing ready for de-
sensitization.

Plate IV shows the student peeling off the soft
cloth used for applying the desensitizing solution
to the plate.

Plate V shows application of the desensitizing
solution.

Plate VI shows litho-ink, charging plate, polyurethan
brayer, and student reapplying the desensitizing
solution to the plate after printing before inking
the plate again.

Plate I

Plate II

Plate III

Plate IV

Plate V

Plate VI

SUMMARY

Movements of modern, contemporary art come and go but each one leaves its mark in history. If art teachers only taught the latest developments in a medium, students would become stifled and incapable of creating new ideas. This "author-teacher" surmises that the original ways of the "Old Masters" should be taught along with the newest techniques. An age level such as the middle school can learn to appreciate the past as well as the present.

The middle school art curriculum needs to be broadened each year by new stimuli. This thesis can be used as a means for other teachers or students to provide that stimulus. A basic understanding for printmaking has been introduced as a starting point provided for various projects.

The brief introduction to the history of printmaking gives proof that the creative endeavors for printing were invented before the jet age of today. As the space age is a part of our present environment, so was the romantic age a part of the industrial revolution. Man and creativeness are a part of life; no bounds can be put on its place in time. Art Education has not advanced as rapidly as the constant invention of the creative mind; therefore, constant attention must be given to new, innovative ideas that may be used in the classroom. Printmaking, on the middle

132

school level, is one way to achieve new creativeness for young minds. It can be created from very primitive inexpensive means and produce very contemporary prints with present day appreciation for the world that incompasses students on the middle school level.

Anyone who wishes to develop their own printmaking skills of middle school level curriculum, with the help of the history of printmaking and Art Education, will be able to find tested methods and helpful uses of ideas and materials herein.

DEFINITION OF TERMS

Baren: Traditional Japanese tool for pressing paper against an inked block to produce a print. It consists of a circular pad made of a braided mat covered with a bamboo sheath. A circular movement is used as pressure is applied.[1]

Brayer: A hand roller for inking relief blocks.[2]

Burr: The ridge of rough metal left on either side of the furrow in metal engraving. In line engraving it is removed, but in drypoint is allowed to remain because it gives a soft, rich quality to the printed line.[3]

Cross Hatching: Method or technique of drawing or engraving in which shaded or modeled areas are represented by series of parallel lines crossing each other diagonally or at right angles.[4]

Dabber: A round pad of felt, about three or more inches in diameter, wrapped in kid leather. The dabber is a do-it-yourself

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[1]John Quick, Artists' and Illustrators' Encyclopedia. (New York: McGraw-Hill Book Company, 1969), p. 11.

[2]Ralph Mayer, A Dictionary of Art Terms and Techniques. (New York: Barnes and Noble Books, 1981), p. 44.

[3]Harold Osborne, The Oxford Companion to Art (Oxford: Clarendon Press, 1970), p. 176.

[4]Bernard S. Myers, ed., McGraw-Hill Dictionary of Art, 5 vols. (New York: McGraw-Hill Book Company, 1969), p. 186.

instrument used to apply etching ground to the warmed plate and especially to ground or intaglio plate in the traditional manner.[1]

Drypoint: An intaglio printing process in which a copper or zinc plate is inscribed directly with a pointed needle of steel or, more rarely, with a Jewel Point; also, a print made by this process.[2]

Edition: In the area of fine prints, a particular number of impressions of the same visual image, each of which is an original.[3]

Embossing: Technique for producing raised designs, usually on metal but also on leather and textiles. The object to be embossed is impressed with a die; in the case of metal it is hammered from the back. In textiles the same effect can be produced with various weaves.[4]

Flat-Bed Press: There are two major kinds of presses: flat-bed and rotary. For flat-bed presses the printing plate for type and cuts are flat. For rotary presses the printing surface is cylindrical.[5]

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[1]Myers, McGraw-Hill Dictionary of Art, vol. 2, p. 201.

[2]Mayer, A Dictionary of Art Terms and Techniques, p. 120.

[3]Myers, McGraw-Hill Dictionary of Art, vol. 2, p. 337.

[4]Ibid., p. 344.

[5]Quick, Artists' and Illustrators' Encyclopedia, p. 59.

Gouges: Tools used for cutting wood and linoleum. The two basic types are the V-gouge and the U-gouge.[1]

Impression: In graphic arts, when one proves his plate, block, or stone by running a proof, he is said to have pulled an impression. Consequently, a dampened sheet or handmade paper in direct contact with an inked plate, block, or stone will yield an impression.[2]

Intaglio: Consists of cutting forms out of a surface so as to form a kind of relief in reverse. The most common example is engraved seal-ring, hence the opposite term is often "cameo."[3]

Linoleum Cut: A relief print made from an image cut on a piece of battleship linoleum.[4]

Lithography: Method of graphic reproduction developed at the close of the eighteenth century. It is a planographic (surface) process that obtains prints from a stone or metal plate on which an image has been drawn with greasy substances, making use of the natural antipathy between grease and water.[5]

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[1]Jules Heller, Printmaking Today (New York: Holt, Rinehart, and Winston, Inc., 1972), p. 337.

[2]Myers, McGraw-Hill Dictionary of Art, vol. 3, p. 159.

[3]Peter Murray and Linda Murray, Dictionary of Art and Artists (New York: Frederick A. Praeger, Inc., Publishers, 1965), p. 106.

[4]Heller, Printmaking Today, p. 337.

[5]Myers, McGraw-Hill Dictionary of Art, vol. 3, p. 449.

Mixed Media: In printmaking, prints made by combining two
or more processes or by combining a print process with different art
forms.[1]

Monotype (Monoprint): Neither a print nor a painting, a
monotype lies midway between the two. It is made by painting a
composition on a stone, plate, glass slab, and so on with oils or
other pigments. A dampened sheet of paper is then placed on top of
the painting, and a monotype results when the two are run through a
press or when the back of the paper is burnished with a baren or
similar tool.[2]

Papyrus: A writing material prepared from the stem of the
marsh plant of the same name, growing in antiquity principally in
Egypt and now in the Sudan. It was in Egypt from the third millenium
onward and was the standard writing material in ancient Greece and
throughout the Roman empire.[3]

Planographic Prints: Fine prints which are the result of
surface painting. The design or composition, normally on a stone,
is neither raised above the surface, as in relief printing, nor
placed below the surface, as in intaglio printing. Planographic
prints are usually obtained from lithography.[4]

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[1]Heller, Printmaking Today, p. 337.

[2]Myers, McGraw-Hill Dictionary of Art, vol. 4, p. 107.

[3]Osborne, The Oxford Companion to Art, p. 812.

[4]Myers, McGraw-Hill Dictionary of Art, vol. 4, p. 390.

Print: Original work of art on paper (one of an edition of multiple originals) deriving from a design or composition drawn, engraved, or cut on a stone, plate, or block. The paper must come into direct contact with the stone, plate, or block during the process of printing. It is neither a reproduction nor a photograph.[1]

Printing: In graphics, the art of making impressions from wood blocks, plates, stones, or silk. Separate and different printing presses or variants there of are required for each of these materials: a Washington hard press, a lithographic press, or a silk stencil.[2]

Printing Press: A machine for the production of printed impressions on paper and other material.[3]

Proof: Each impression made by or for an artist from the block, stone, plate, or silk screen. Since proofs are usually made for specific reasons, such as correction, clarification, addition, verification, and so on, they are variously called the artist's proof, the bon a tirer (ready to print).[4]

Pull: To make a print by transferring the ink to the paper.[5]

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[1] Ibid., p. 443.

[2] Ibid.

[3] Quick, Artists' and Illustrators' Encyclopedia, p. 172.

[4] Myers, McGraw-Hill Dictionary of Art, vol. 4, p. 445.

[5] Heller, Printmaking Today, p. 338.

Relief Printing: Print obtained from a block cut in relief. The block is usually of wood, but may be of metal or another substance. It is cut into so that the image to be printed stands raised in relief above the surrounding areas.[1]

Rubbing: An impression made by moistening a thin tough paper and patting it into incised parts of a carved or modeled surface, then rubbing it with pencil, chalk, inked pad, or watercolor. An actual size image of the original is produced on the paper.[2]

State: The name given to the stages in the development of an engraving or etching.[3]

Stylus: In the history of art, a metal point used for faint marking probably has had a wide and variable use since metals were discovered. Such a point was a common writing instrument in ancient times.[4]

Vellum: A fine kind of parchment prepared from calfskin, lambskin, used as writing parchment or for binding books.[5]

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[1]Myers, McGraw-Hill Dictionary of Art, vol. 4, p. 493.

[2]Quick, Artists' and Illustrators' Encyclopedia, p. 180.

[3]Murray and Murray, Dictionary of Art and Artists, p. 191.

[4]George L. Stout, Encyclopedia of the Arts, ed. Runes, Dagobert, and Schrickel (Boston: Harry G. Fogg Museum of Art, Harvard University).

[5]Webster's New World Dictionary of the American Language, College edition (New York: The World Publishing Company, 1959), p. 1615.

Whiting: Native calcium carbonate mined in various parts of the world and used as an Inert Pigment in such products as gesso.[1]

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[1]Mayer, A Dictionary of Art and Techniques, p. 431.

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