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Commonwealth of Kentucky

# EDUCATIONAL BULLETIN

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## ART EDUCATION



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DEPARTMENT OF EDUCATION

ROBERT R. MARTIN  
Superintendent of Public Instruction  
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## *foreword*

Art is a fundamental part of Kentucky's ever advancing educational program. As a unique and vital area of the curriculum, it makes an essential contribution to the creative, mental, and emotional growth of Kentucky boys and girls. In an effort to promote a better understanding of the art program the Department of Education has published this bulletin. The point of view expressed in this publication is based upon the feelings, ideas, and knowledge of many Kentucky educators. The bulletin was designed to present an overview of the art program rather than detailed information about procedures and techniques. The various sections have been kept brief in order that the reader may readily acquire a general picture of the diverse facets of the art program. The recommendations mentioned herein, are general and require interpretation to be of value in specific situations. It is hoped that this bulletin will be of service to schools as they plan new art programs or enrich present programs.

Robert R. Martin  
Superintendent of Public Instruction

## *acknowledgments*

This bulletin came into being through the efforts of many individuals who have recognized the fundamental role art plays in every person's life.

Through their faith, art will continue to move forward to give meaning to life where ever it goes and enrich the culture in which it dwells.

By recording the names of these individuals who gave their time and knowledge, a meager attempt has been made to give them the recognition they so richly deserve.

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*Art and Education*



## *art and education*

In today's world where each day brings the far flung regions of the globe closer together, where technological advancement is so rapid that its human benefits have scarcely time to be identified, where individuality is fast becoming a nonentity; man is faced with the tremendous task of understanding and cooperating with his fellow man while at the same time continuing to maintain his own unique personality. He is also committed to continue with even more concentrated effort the accumulation of knowledge of the physical world while at the same time he has the task of integrating this new found knowledge into a realm of understanding which will promote the betterment of the human race.

The magnitude of these tasks is becoming more apparent with each passing day. The upsurge of human problems both of an individual nature and those relating to groups has further intensified the seriousness of the solemn task which faces our country and the others of the world.

A very significant part of the responsibility for meeting these pressing needs lies on the shoulders of education. The specific responsibilities of the schools in our nation have continually changed as the needs of our free and democratic society have changed.

In light of the changing needs of our country the participants in The White House Conference on Education<sup>1</sup> have identified certain major objectives for contemporary American education. Of the fourteen objectives listed in the Conference Report, eight relate directly to the values of art education. The eight objectives are as follows:

1. The development of respect and appreciation for human values and for the beliefs of others.
2. The development of the ability to think and evaluate constructively and creatively.
3. The development of effective work habits and self-discipline.
4. The development of intellectual curiosity and eagerness for life-long learning.
5. The development of aesthetic appreciation and self-expression in the arts.
6. The development of physical and mental health.
7. The development of wise use of time, including constructive leisure pursuits.
8. The development of an awareness of our relationships with the world community.

These objectives and the seven others identified by the Conference are considered to be of the upmost significance. For, as they are realized, our young people will be better equipped to meet the future and its problems as confident, qualified, and creative individuals.

<sup>1</sup>The White House Conference on Education, 1956.

In Kentucky the guiding principals which are held by the schools parallel the general objectives which have been identified in the Conference Report.

From the guiding principals spring the many specific objectives which are the foundation stones for the education programs across the state. Art education, as a fundamental part of Kentucky's school program, has nine such objectives. They are as follows:

To provide avenues for the individual to express and communicate feelings, ideas and concepts through the visual arts.

To provide experiences which will foster the development of the maximum creativity of each individual.

To help students recognize and value man and his creativity through all times.

To develop aesthetic appreciation by continually encouraging the critical and analytical observation of art and nature.

To encourage individuals to be self directive, thereby forming a basis for self discipline.

To provide experiences which will help develop the cooperative approach to the solution of visual art problems.

To provide knowledges and skills which will form the foundation for constructive leisure time pursuits.

To provide guidance for individuals who plan to make their vocation.

To build an appropriate foundation of knowledges and skills which will allow the individual to develop to his maximum potentialities through a twelve grade program and into adulthood.



These objectives are extremely important to the program which hopes to fulfil its obligation to young people.

In order that the preceding objectives may best be implemented in the classroom, the State Board of Education has identified six art areas, as those which are essential to the program which hopes to offer maximum values. The areas are; graphics, drawing and painting, three dimensional art, design, art appreciation, and crafts. These six areas are needed in order that desirable experiences may be provided to take care of the individual differences of young people.

Some individuals by nature react quickly to any situation while others move much more slowly and carefully. This variance is a determining factor in the selection of suitable art activities for individuals.

The art program should be designed so that each and every individual regardless of their unique characteristics or capabilities may have equal opportunities for self expression and complete development.

*Art Areas*



# *graphics*

Graphics, or Graphic Art, is defined generally as painting, drawing, engraving and any other art which pertains to the expression of ideas by means of lines, marks or characters impressed on a surface. More specifically, in this bulletin the term refers to etching, engraving, lithography, silk screen printing and block printing.

A major reason for the popularity of this area lies in the fact that many copies, or "prints", of the original artistic effort may be produced, thereby expanding the opportunities for individuals to view and discuss the work.

Many of the world's great masters have used these processes for their artistic expression. As students experiment with the various methods and techniques, they develop an appreciation of the mastery with which these artists have executed visual images of their ideas.

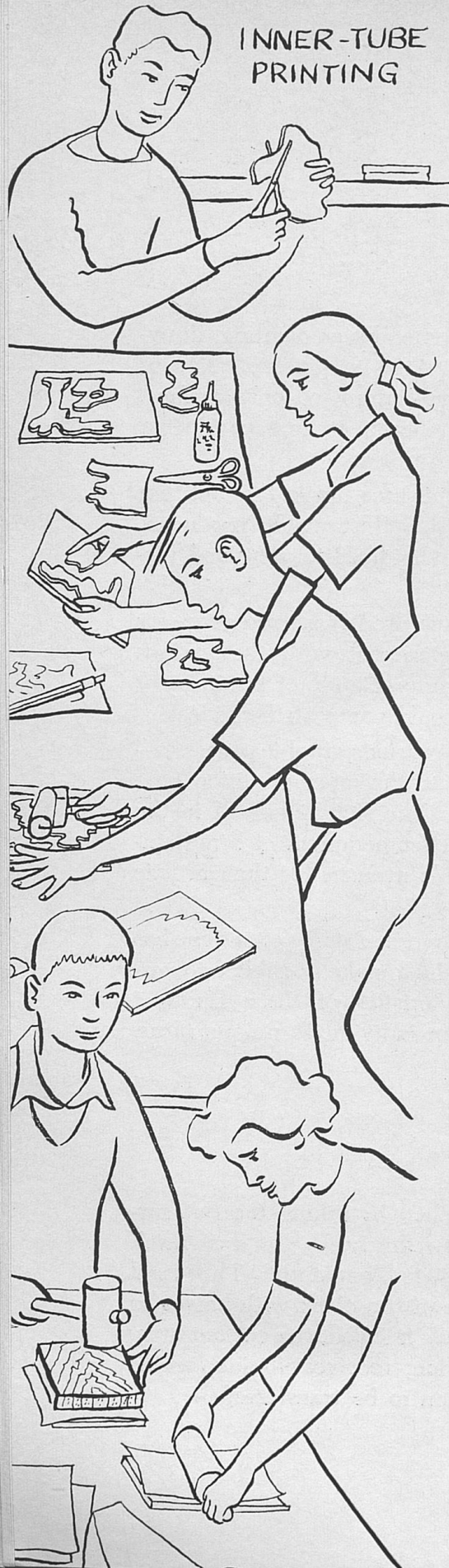
Special tools of all types are used in the various graphic processes—tools ranging from a simple pocket knife to the more precision type of cutting instruments used in engraving. The skills involved in the use of these tools may suit the individual temperament of some students, thereby affording them more suitable avenues for their artistic expression.

As the processes are discussed in more detail, attention has been given to the sequence of activities which make possible an ever-developing understanding of the characteristics of these "indirect methods" of producing visual images of an individual's unique ideas.

## *block printing*

This method of printing is accomplished by inking the flat surface of some type of block and then pressing this surface on a material, thereby transferring an image of the surface to the material. The visual ideas of the artist are cut into the surface of the block with knives or special block cutting tools. When the block is inked, the cut out area, because it is lower than the uncut portion, receives no ink, which causes only the image of the uncut portion to be transferred.

## INNER-TUBE PRINTING



## *stick and potato printing*

Children at the primary level in the elementary school begin their experiences in block printing with sticks, spools, small wood blocks, sponges or any other fairly absorbent object with a flat surface. These objects are inserted in a heavy tempera paint, then pressed on a piece of paper or cloth. The flat surface of the block may be altered by simple saw cuts or knife cuts to produce a greater variety of shapes. When a potato or some other vegetable of similar characteristics is used, the children first cut the potato so that a flat surface is exposed. Into this surface cuts may be made to any desired shape. The potato is then printed, using the same procedure used for sticks.

## **cork, innertube, and cardboard printing**

These printing methods necessarily follow stick and potato printing because of the skill involved in cutting cork, innertube and cardboard. Aside from the skill factor, cork printing is carried out in the same fashion as stick and potato printing. Innertube printing, on the other hand, has some marked changes in procedure. First, a piece of innertube is selected which has an even thickness. From this the child cuts shapes of his own preference and fastens them with water proof glue to a heavy piece of cardboard. When the glue has dried, the surface of the innertube is covered with printing ink or heavy tempera paint and pressed onto some material, leaving an image of the innertube shapes.



Cardboard printing, for the most part is identical to innertube printing. In this type of printing cardboard shapes take the place of the innertube and is processed in a similar manner. A variation of this method has been developed which begins with a flat piece of cardboard into which shapes are cut and removed, leaving a valley in the cardboard. Some shapes are marked on only three sides, then peeled away, leaving one edge which is a gradation from the top surface to the depth of the valley.

### *plaster block printing*

This method of printing uses a plaster block with at least one smooth, flat surface. Images are carved into the flat surface with a variety of tools, ranging from the common nail to the precision engraving instrument. The block is inked in the regular fashion and the ink image is transferred by rubbing a spoon over the material placed on the block.

### *linoleum block printing*

Linoleum block printing is one of the most popular graphic art activities in the school art program. The reasonable price of cutting tools and the availability of scrap pieces of linoleum are partially responsible for the wide acceptance of this activity. Another important factor which has stimulated the use of linoleum is the characteristic of the material itself. It is easy to cut, fairly substantial and the surface is such that detailed images may be carved. Best printing results are obtained when a rubber roller, called a brayer, is used to ink the block and a press is used to transfer the image; however, fairly acceptable prints may be produced with a rolling pin or the round surface of a spoon which is used as a burnisher.

### *wood block printing*

This method of printing may be divided into two general groups—wood engraving and wood cuts. Wood engraving uses the end grain surface of a block of wood. Engraving tools rout more than cut into the surface as the student develops his ideas. Very detailed images are possible with this method because of the even consistency of the end grain of the wood. Wood cuts, on the other hand, do not lend themselves to the detailed line work because of the inconsistency of the hardness of the surface of a “with-the-grain plank”.

Wood cutting tools are similar to those used for linoleum work, while the wood engraving instruments are similar to those used for metal engraving.

Wood blocks are inked and printed in the same way as linoleum blocks.

Many fascinating prints have been taken from wood blocks which were the result of a high school student's special interest in going beyond the linoleum block. Of course, there is more skill needed to direct the cutting tools across the surface of a piece of wood, but the personal satisfaction derived from mastering this more complicated activity is ample justification for encouraging interested students to experiment with these tools and materials. These are other values which should be considered: (1) Wood is a more substantial material than linoleum; (2) Greater detail is possible-- and (3) the infinite variety of grain patterns may be incorporated in the finished print.

## *silk-screen printing*

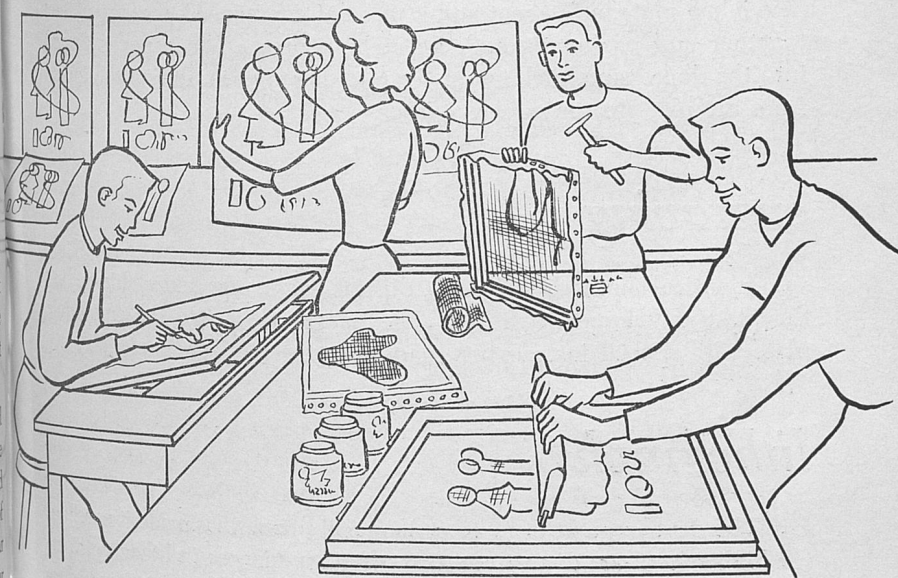
The silk-screen process, some historians state, was developed by the Chinese. Other historians say it was developed by the ancient Egyptians. Though we cannot determine its origin, there is evidence that the method of cutting stencils for duplication was used in ancient times.

Silk-screen printing is a versatile activity that may be adapted to the elementary level as readily as to the high school level. In the elementary school a satisfactory type of silk-screening may be carried on with embroidery hoops or boxes, inexpensive organdy, some type of rubber squeegee and finger paint. At the high school level similar materials may be used but a more professional type is needed for detailed work.

This process, considered by some to be extremely complicated, is really relatively simple. A stencil, which may be wax paper or the regular stencil paper, is affixed to the underside of a screen of organdy or silk which has been stretched tightly over a frame. The paper or material which is to receive the image cut out of the stencil is placed on a table, then the frame is placed over it. A thick paint is spread across one end of the screen and by using a rubber squeegee, the paint is drawn from one end of the screen to the other. Where there is an opening in the stencil which is attached to the screen, the paint is pressed through to the material beneath.



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## *etching*

Rectangular pieces of sheet copper or zinc are generally used for this process. This sheet of metal is called a plate and it is covered with a thin layer of acid-resisting material. Into this layer the student scratches the image of his preference. The scratches expose the metal which is eaten away when the plate is placed in a solution of acid. When the acid has had time to react on the metal so that a valley is formed which is deep enough to hold ink, the plate is removed from the acid bath and washed in clear water. The acid-resisting material is removed from the plate and a printing ink is rubbed into the depression caused by the acid action. The plate is then wiped clean with a stiff cloth which does not remove the ink from the depressions. The inked plate, a felt mat and a piece of dampened paper are placed together and passed through an etching press. The paper is forced into the depression, picking up the ink, thereby transferring the image from the plate to the paper.

## *engraving*

Identical methods are used to print engravings and etchings, but the plate development differs. The image is cut into the engraving plate with special instruments made of extremely hard material.

## *lithography*

The development of more economical presses has made it possible for high school art departments to offer experiences in lithography to interested students. Stones are still the most popular plates used for this process because they may be used again and again; however, sheets of zinc and aluminum are used where finances permit. The principal that water and oil will not mix is the basis of this process. An image is drawn on the flat, smooth surface of the stone with a grease pencil. The surface of the stone is dampened, allowing the water to penetrate all areas except where it is repelled by the grease marks. While the stone is still damp an inked roller is passed over the stone, depositing ink only on the marks made by the pencil. Dampened paper is then placed over the stone and it is passed through a press which applies enough pressure to cause the ink to transfer to the paper. When the paper with the image is removed, the stone is dampened immediately and inked for the next printing.



# drawing

For many years a particular type of representational drawing was considered to be the major activity in the art program of our schools. This type of drawing was evaluated in terms of how well it resembled photographically the subject being represented in the drawing. Formulas, such as one and two point perspective, aerial perspective, proportion, etc., were strictly adhered to and any consideration for the elements of design was practically non-existent.

In these early art programs, any attempt at imaginative drawing was for the most part forbidden and an individual's unique perception of the world around him was not considered.

The values associated with this rigid practice of representational drawing have for the most part been proven invalid today. In fact, a continuation of this practice would destroy much of the value the contemporary art program has for the child.

In today's schools, the following definition for drawing is accepted by the majority of the educators:

Drawing is the act of dividing a surface into shapes with or without tone variations. The shapes may represent people, houses, boats, or they may be completely abstract. These shapes may, as it was pointed out, have shading or they may be defined only with lines. The surface may be paper, cloth, stone, or any other material on which the drawing instrument will make a mark.

This definition would have applied to the drawing program in the early schools. The difference between drawing as an activity in the past and drawing in today's more vital and dynamic art program lies in the purposes for which drawing is used.

Today, drawing is used as a means for visual planning of many art projects, such as pieces of sculpture, architecture, utilitarian objects, posters and paintings. It is used as an avenue for visual interpretation of natural and man-made objects. It is used as a means for recording shape relations and tone relations of various objects or combinations of objects. It is used as an avenue for children to visually recall a noteworthy experience or to visually express their ideas or feelings. It is used as an avenue for the development of eye to hand coordination.



Drawing is accomplished in a variety of ways, according to the purpose the individual has for making the drawing. Many of the popular drawing media (materials) have been listed below with some of their limitations and possibilities:

## *pencil*

Pencils vary greatly in style and type. They may have graphite, conte', charcoal or wax cores encased in wood or paper.

The graphite core pencils are rated in relation to their degree of softness or hardness. Usually they cover a range from 8 or 9B, the very soft, to 9H, the very hard. The "B" pencils are used for sketching and so-called free-hand drawing, while the "H" pencils are used for drafting plans or any other projects where a thin line is necessary.

The charcoal, graphite and conte' pencils are usually wood encased while the wax pencils are encased in paper which may be peeled off in regular strips to expose the wax core.

Pencils are excellent for line drawing and small tone drawings; however, only a few types are appropriate for the larger tone drawings. Most pencils make a fairly permanent mark, however, a finished drawing, should be sprayed with a fixative or put under glass when it is displayed.



## *charcoal*

Charcoal is appropriate for quick sketches and visual planning. There are several types available. The vine type is in the original form of the twig which has gone through the charcoaling process. Depending upon the wood processed, the finished product will vary in degree of softness.

Another type of charcoal is the compressed type which is more uniform in size and consistency but is not considered to have the degree of softness found in the vine type.

These materials are most effective when used on a special charcoal paper that has a rough surface. The charcoal stick may be pointed for fine lines or used on its side for broad strokes. An entire drawing may be wiped from the surface with a chamois skin if the individual so desires. Because of this "easily erased" characteristic of charcoal, a drawing must be sprayed with a fixative before it is safe to handle.

## *conte' crayon*

Conte' crayons are approximately  $\frac{1}{4}$ " square and 3" long. They are manufactured in three degrees of softness. Conte' is a chalk-like material which does not smear or dust off to any great extent. It is excellent for quick sketching because it may be pointed for fine lines or used on its side for broad shaded areas. Conte' is stronger than chalk; it is fairly permanent and it is excellent for making large, dark areas.

## *pen and ink*

Pen and ink have been one of the most popular drawing combinations down through the ages. Ink's permanency and the possibility of strong contrasting tones with it, are the factors which have encouraged the artist to use this medium for his artistic expression.

Today there are a great variety of pen points manufactured which are available at reasonable prices. Those discussed below have found wide acceptance in art programs:

A Crow Quill is a small pen point of standard design used for detail work and fine line drawing.

Lettering pens are special pens formed with two or three pieces of metal so as to hold a greater amount of ink. The points are so designed that they will produce the variety of lines necessary for the many styles of lettering.

Drawing pens are regular size points of standard design which are flexible in order that increased point pressure will produce a wider line.

Felt tip pens are usually of the fountain type with replaceable felt tips which vary in width up to about  $\frac{1}{2}$  inch. They are widely used for quick lettering because of their ease of handling and the quick drying properties of the special felt tip inks.

## *graphite block*

These blocks are solid graphite which are usually 3" long and  $\frac{1}{4}$ " square. They are fine for sketching because of variety of line width which they are able to produce.

## *chalk and wax crayon*

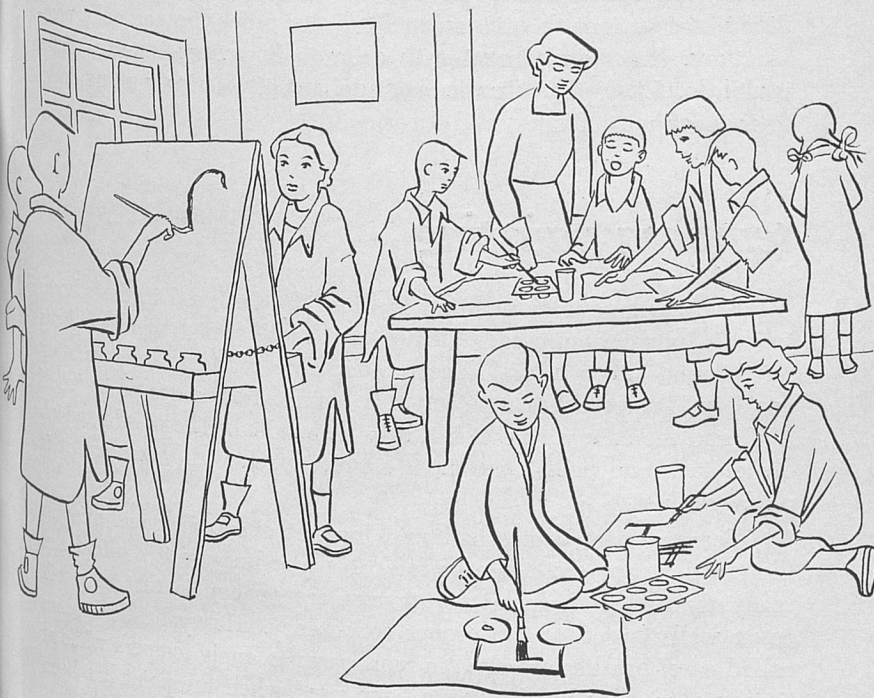
Most of us are familiar with chalk and crayon. The wax crayons are fairly permanent but are not appropriate for fine line drawing. Chalk may be rubbed for smooth color shapes but must be sprayed with a fixative if the finished work is to be handled.



# painting

Painting is many things. To some it is the exclusive use of a brush as it applies paint to canvas. To others it is a dripping of color from a can as it moves across a piece of coated masonite. To still others it is the applying of paint in any of the many and varied ways to create the illusion which they desire.

To children painting is a way to tell a story, to express ideas, to thrill at the many color effects, and to relive rich and vital experiences.



Painting is many things all of which deal with the applying of colors to a surface. The methods are not important, the experience and the result are.

The child dips his brush into a rich color and makes a mark, other marks follow, either in rapid or leisurely succession, and soon he has finished a painting. Knowledge and skill develop as the child has experience after experience guided by the sensitive and understanding teacher.

Fundamentally painting is concerned with color, texture and shape. Color has certain properties which have been identified so their functional aspects may receive consideration. The properties are titled value, the light or darkness of color; intensity, the degree of brightness of color; and hue, the specific type of color such as blue, red, orange or purple.

As children progress through the twelve grade program, they discuss the various theories related to color properties and color combinations. They experiment with color to find what fantastic things it will do. They paint for the sheer delight of painting, putting down their inner most feeling and ideas.

## *tempera painting*

The most popular painting medium, by far, used in the schools today is "powder tempera." Elementary as well as high school students have found this material readily adaptable to their many painting projects. Tempera has received this popularity because of its "shelf life", and the ease with which it may be handled. The powder, which comes in a one pound carton, is simply mixed with water and it is ready for use.

Tempera also comes in liquid form at about the same price as the powder. Some educators prefer this type because it is mixed and ready to use. Both forms of tempera are opaque in that they will cover well if used at the proper consistency. Heavy bristle brushes called easel brushes are used in most cases to apply tempera while at times water color brushes have been used when the paint has been thinned slightly.



## *water color painting*

Water color painting is practiced with a material made of finely ground color pigment and a gum substance which acts as a binder holding the color to the paper. In schools the "semi-moist" water color block is used almost exclusively.

A wet brush is rubbed across the block transferring the paint to the brush which may be applied directly to the paper or added to water for lighter washes. The paint is transparent even in its most concentrated form. This factor causes water color to adapt itself to a transparent wash type of painting.

Water color painting is usually introduced at the intermediate level of the elementary school when children have acquired sufficient skill in the handling of the brush. The many effects, which are possible with water color, excite and stimulate children to experiment and devise their own unique techniques of painting. As understanding of the limitations and possibilities of this medium are developed, children have many rich painting experiences.

## *oil painting*

Oil paint, the medium of the masters as it is referred to, has had centuries of fruitful existence. It is pure color pigment mixed with linseed oil. This produces a painting material which will last for years if the proper care is taken in its application.

Oil paint is usually applied with a brush, however, many other methods of application have been developed which may better suit the temperament of certain individuals.

Stretched canvas, masonite, and many other surfaces have been used as a base for the creative efforts of artists and amateurs alike.

Oil paint is slow drying compared to the other painting media, a fact which makes it possible to blend the colors and make adjustments with ease. Because of the versatility of this medium it is one of the most popular painting materials used today.

*three  
dimensional  
art*





## *modeling*

Modeling is the act of building up or shaping three dimensional forms, using a pliable substance. A variety of materials are used for this activity, each having about the same characteristics, which make it possible for the material to be pulled apart and then kneaded together again.

One of the most popular modeling materials used in school work is clay, of which there are two types. One, referred to as water base clay, is a natural product taken from the ground. The other type is oil base clay, made from powdered natural clay and a slow drying oil. While the water base clay must be kept damp to remain pliable, the oil base clay may be worked, without fear of it's drying, for many months.

Other modeling materials which find wide usage in our schools, especially at the elementary level, are formed by mixing either flour and salt and water; sawdust, flour and water; metal filings and glue; or paper pulp and paste.

This activity plays a major role in the art program of the schools of Kentucky. The various materials needed to carry on the activity are inexpensive, and a minimum of special equipment is needed to provide many meaningful experiences for the pupils.

Of the many values which are associated with modeling, the ones listed below have been identified as those meeting a major need in the art program:

Modeling is an appropriate means for children to express ideas and recreate images in a three dimensional form.

Modeling is a means for the economic investigation of the many and varied solutions to visual problems related to three dimensional projects.

While modeling, it is possible to make adjustments and effect major changes in a short length of time. This fact makes modeling suitable for meeting the needs of those individuals who by nature operate in an accelerated fashion.



## *constructions*

To children, constructing is as natural as speaking or walking. From the very beginning they reach out for the many wonderful materials which make up our world.

Each thing that comes in their grasp is a new experience in taste, touch, sight, and smell. As they become familiar with rocks, pieces of wood, and paper, they use these materials to create things; things which are real and vital in their lives. As time passes they search for new objects, which they attempt to reshape by bending, pounding, sawing, and squeezing. They discover that rocks will crack but not squeeze, that wood will split, that wire will bend, and that dirt may be pushed into many shapes. Each experience adds to the children's knowledge of the world in which they live. Upon these early experiences new ones are added as the child progresses through the school years. Deeper understandings develop, and their constructions become more controlled and refined creations.

Wire, paper, wood, cardboard, papier mache' and metal are the popular materials which students shape into exciting and imaginative constructions. Each material is introduced at a level when the student is capable of cutting, bending, twisting, curling and shaping it into the form he desires. Several particular types of constructions have found their way into the hearts of many art programs. These are discussed briefly in the following paragraphs.

## *collage*

The sensitive and understanding teachers recognize their children's need for construction experiences and provides many opportunities for them to discover new and exciting ways to use materials. One avenue which is limited only by the world itself is collage construction. Children collect many objects of a wide variety. These may be contrasting materials such as, bits of tin and scraps of cloth, cinders and pebbles which have been rolled smooth in the tumbling waters of a creek, balls of cotton and pads of steel wool. Designs are constructed of these many objects and thousands more. As the objects are placed next to other objects a variety of textures, subtle color relationships and interesting shapes are created. When the child is satisfied with the arrangement, the segments are glued in place on a piece of heavy cardboard thereby capturing in visual form the unique idea the child wished to express.



## *mobiles and stables*

Did you ever sit and watch a tree move and sway in the wind, or notice a flower shimmer as the rain falls on its petals, or look at the graceful way the wind pushes a piece of paper far into the sky, releasing it to float gently down to earth?

If you have thrilled at these sights then you can understand the child who sits and gazes at the mobile he has created as the breeze through the window gently moves the various parts up and down and round and round.

Even as he gazes the child is ready to begin another. Perhaps this time some bits of screen may be used which will not catch as much breeze as the metal he used before.

If a smaller thread were used to suspend the parts, they would turn and twist more freely, sparkling as they catch the light.

Experimenting and learning never cease as children create mobiles and stables from the many materials which they collect from within their world.

Basically mobiles are constructions that move. They are designs in space which are formed in such a way that each part moves freely. Some are constructed with each part delicately balanced so that the slightest breeze sets the entire construction in motion.

Stables are constructions which are stationary. They might be made of wood, wire, plastic or cardboard. They might represent a particular thing or be completely abstract. Whatever the case, materials and time would be the limiting factors, because the child has the necessary imagination and know how.



## *papier mache'*

Papier mache' is a mixture of paper pulp and some sort of paste or glue binder. This material has somewhat the same characteristics of clay in that it is pliable and may be shaped into a great variety of objects.

Because of the time involved in preparing papier mache' and the need for a material which has greater strength in a thin layer, other methods of using paper and paste to form three dimensional objects have been developed. One type which has found wide acceptance in our schools is called semi-moist papier mache'. This method has some variations, but basically they all carried on in about the same fashion. Strips of paper, usually newspaper, are either dipped or soaked in a thin solution of water paste, then formed in a criss-cross fashion over some type of skeleton structure. The number of layers of paper which are used will vary in relation to the purpose of the object being constructed; however, in most cases, four thicknesses of paper are sufficient. The skeleton structure used as a foundation for this method varies in relation to the type of object to be constructed and the availability of materials. Rolled and wadded newspaper, chicken wire, oil base clay, pieces of wood, wire of all types, cardboard boxes are only a few of the things which have been used to build up the skeleton of the object which is to be produced.

Papier mache' activities afford opportunities for three dimension design on a large scale at an economical cost. In the majority of cases the regular classroom provides the necessary facilities for the successful completion of papier mache' projects.



## *paper construction*

Paper is a natural material for the school art program. It is easily stored and reasonably priced. Children in the first grade have experiences with this versatile material which seems to come to life as it is cut, twisted, rolled and shaped into many and varied creations. As experience after experience is completed understandings develop of the infinite possibilities of paper as a means for creative expression.

Only the barest minimum in equipment and materials is needed to open the door into a world of exciting shapes and textures. A pair of scissors, some paste, a sheet of paper and a motivated pupil form the foundation for an experience which has only the imagination as its limitation.

Because of the many possibilities of shaping paper, age becomes no barrier for the participation in the exciting and fruitful paper construction experiences. High school and elementary pupils alike find it an avenue which continues to keep their interest high.

## *carving*

Carving, one of the activities in the three-dimensional art area, is a unique experience in which the final object is developed by a "taking-away" process. The student begins with a block and carves away the unwanted material until his or her idea has emerged. Because of the nature of the process, a student must take the responsibility for a decision he makes related to the cutting away of material, for once the material is taken away there is no turning back. If an unwanted cut is made, adjustments on the other parts of the object will be necessary to make the mistake acceptable. This process is exciting to children because each cut must be thought out as the idea emerges from the block of material. Planning is important if the visual fulfillment of their idea is to come into being. Special consideration must be given to the necessary size, shape and substance of the block which is to be carved. Children must be able to cut the substance with relative ease. Certain forms are not applicable to a carving activity because of the necessary variations in the size and shape of the parts of the proposed object. For example, to attempt a bird form with open wings and out-stretched legs in most materials would be disastrous. The thin legs would be too fragile for all practical purposes and would probably fracture with the first attempt to pick it up, if not during the carving process.



As children consider these problems and work with the many and varied materials used for carving projects, they develop an awareness of the unique characteristics of many substances which are used by mankind. Their eye-to-hand coordination improves as they cut away just the right amount from the surface of an object which is to be their own unique expression.

The popular carving materials used in schools today are soap, clay, plaster and plaster combinations, wood and stone.

### *soap carving*

Soap has found wide acceptance as a beginning carving material in the upper elementary grades. As children begin their carving experiences, the necessary control of the cutting tool has not fully developed. This results in many unintentional slips of the knife which could cause the child much concern.

Soap, because of its relative elasticity, is able to absorb many of these slips without serious damage to the form. The extra cuts which accidentally happen may be burnished away, and broken appendages are fastened back in place with relative ease.

The mistakes in the beginning are important, because through these the children learn. In the case of soap carving, these mistakes may be overcome, giving the child a satisfying experience.

### *clay carving*

Clay and soap share equal popularity as an introductory carving material. The two substances are alike, in that both may be shaped with comparable ease, and repairs are accomplished with very little effort. At this point, though, the likeness ends. Soap, as was pointed out earlier, is relatively elastic, while clay is brittle when it is in the carving state. Much more care must be taken to insure the successful completion of a project when carving in clay.

As children prepare this material for carving, they are reminded of its brittle character and are encouraged to form thick blocks which will be substantial enough to stand the treatment they must endure during the carving process.



### *plaster and plaster combinations*

These materials are widely used in the upper elementary and junior high school. Plaster combinations are usually introduced first because they are much softer than the hard and brittle plaster. This new substance has some elasticity which decreases fractures caused by a too energetic carving approach.

The preparation of these plaster combinations is fairly simple. First, various containers are collected, such as milk cartons or cardboard boxes. Then, one part plaster, one part dirt, sawdust or Zonlite, and water are mixed together to form a substance with a consistency of putty. This material is poured into the carton and allowed to set. Usually this takes about forty-five minutes. The cartons are then removed and the block is set aside to dry for a day or two. Carving may then begin.

Future activities may use plaster alone as the substance for the carving block. More skill is required to successfully work with this material because of its hard and brittle character.

Regardless of the material used, excitement runs high as students shape and finish the three-dimensional forms which express their own unique ideas.





## *wood carving*

As students move into the carving activities which are a part of the high school art program, they are introduced to materials which challenge their skill and understanding.

Wood, with its many colors, textures and densities, is one of these materials. It offers wonderful avenues for the expression of the student's unique ideas.

Old and new pieces of wood are studied for suggestions of forms which may already be partially developed. With chisel and mallet in hand, students chip and hew to further identify the form which they envisioned. They move around their developing creation, ever looking for awkward points of view which must be further shaped so that the object will present a beautiful unity from all sides. With every stroke of the mallet, new understanding is developed of the nature of this versatile material. With every adjustment the student's unique expression moves nearer to completion.

## *stone carving*

Although this activity has had limited acceptance in the high school art program, it may offer many rich experiences for the student. Within many a rough boulder lies a beauty which may be developed for the joyous viewing of the human eye. The subtle color combinations and the variety of textures lend themselves beautifully to three-dimensional forms.

To the interested student, carving in stone could be the challenge which is needed to keep his interest high and his production vital and dramatic.

Few special tools are needed to begin a carving activity in the softer stones. Several chisels and a mallet are the necessary tools—so little for so much added value.

## *casting*

Since the early days of the primitive man casting has been practiced and developed. Because of their need for utensils in which to store food and water the aborigines began to shape clay over gourds or some other form and baked them until the clay became hard. While the clay baked the gourd would burn away leaving an object with the original shape of the gourd.

This was the beginning of the highly developed casting methods and techniques used by artisans and industry today. Practically every object now in use has been cast in its entirety or it has parts which have been cast.

The value of casting as an activity in an arts and crafts program has been questioned by many art educators. They feel the experience would be a technical one and not creative. This, of course is true, but if your purpose is to reproduce an object several times, then casting is the most economical method from the standpoint of time, effort and exactness.

Many artists prefer to model in a soft pliable clay which allows them to make rapid changes and adjustments. The finished work then is cast in a more permanent material for posterity.

Casting involves first, the forming of a mold of the object which is to be reproduced; second, some material is poured or pressed into the mold and allowed to set, cool or dry depending upon its characteristics; and third, the mold is removed. The reproduction is ready for cleaning or in the case of clay, firing.

The popular types of molds and casting materials used in the schools are as follows:

1. Plaster molds for slip (liquid clay) casting.
2. Plaster molds for plaster casting.
3. Flexible molds of liquid rubber for plaster casting.
4. Press molds of plaster for clay casting.



# art appreciation

This area in the art program may be divided into two general sections, aesthetics and history of art. According to Webster, "Aesthetics is that branch of philosophy dealing with the beautiful, chiefly with respect to theories of its essential character, tests by which it may be judged, and its relation to the human mind." History of art is that branch of history which deals with the art of man.



In the art program, art appreciation is an active and vital influence which permeates all of the student's experiences.

Reference to the many and varied types of artistic expression is continually encouraged as students move through parallel types of art activities in their class work. Every effort is made to promote greater understanding of the quality of the unique solutions which artists have found for visual art problems.

The factors which are responsible for the universal appeal of a work of art are analyzed and discussed in a permissive atmosphere, where a free and easy exchange of ideas is encouraged. Every effort is made to help students recognize and value man and his creativity through all times.

Art appreciation in some form has already begun to develop by the time children start school. The elementary teacher, recognizing the wide-spread stages in this development, takes advantage of every opportunity to promote and nurture continuing growth in this area. Whenever possible she exposes her charges to original works of art and the many wonders of nature's handiwork. In situations where there is a minimum opportunity for viewing original creations, reproductions of the great variety of art masterpieces become an active part of the classroom. Children are no longer expected to memorize standard sets of miniature color prints as was the practice in the past. Now they are encouraged to discuss, view, and compare works of art, a practice, which has much more meaning for them. The much more vital and dynamic program of today with its greatly expanded value for children of all ages, has come into its own because of the greater distribution of original works of art and the availability of inexpensive full-color reproductions and color slides.

With very little effort the teacher and her children may have many rich art appreciation experiences together.



# design

Design in an art program is an integral part of every experience. It is the thinking through of the purpose of a project, in relation to the many and varied possible solutions to visual problems.

The fact that design has been identified as a separate art area in no way implies that it is a separate element which is approached in isolation. It has been defined as an area in this bulletin in order that consideration may be given to particular types of design as they relate to industrial, community and architectural visual problems.

In the early grades this type of design is approached from the art appreciation stand point with discussions centered around outstanding examples of industrial, architectural and community design. As the student progresses through a twelve grade art program, more emphasis is placed upon his or her individual solution to specific design problems.

Understanding of contemporary building structure, material characteristics and community problems of all types becomes increasingly more important in the advanced art classes as the students plan community centers, design functional furniture and consider the many points of view of a modern building.

These projects offer excellent opportunities for individuals to focus on a single project, the understandings and skills which they have developed through their total art experiences.

Each problem which the student attacks, adds to his or her ever-developing appreciation of quality design. The student emerges a sensitive individual, extremely aware of the great need for a continual advancement of good design in all areas of human endeavor.



# *crafts*

Weaving, stitchery, mosaics, leathercraft, metal enameling, metal smithing, jewelry, applied textile design, basketry and ceramics are the crafts which are discussed as part of the art program. There are many others that might have been included but because of the availability of the necessary equipment and materials they have not had wide acceptance as a part of school art experiences.

These activities deal with the creation of objects which have basically a utilitarian purpose. This does not mean that the same principals which underlie the other art areas are not considered at all times in the production of the many and varied craft projects. These activities merely provide other avenues which may be used to implement the objectives which have been identified for the art program.

Many of these crafts have been traced back to ancient times when relatively more people were actively concerned with the production of utilitarian objects. Today, this number, which had been greatly reduced because of mass production methods, has begun to increase as more and more people are receiving deep satisfaction from a variety of craft experiences. Students show renewed interest when craft experiences are introduced into the classroom.



## *weaving and basketry*

Have you noticed the glow that comes in children's faces as they handle bright colored yarns or the unwavering attention they give to weaving, twisting and bending reed or raffia? Have you seen the look on high school students faces as they step back to view a finished weaving project which is their own unique creation? Perhaps you too have had a similar experience which left a satisfied feeling within you, a feeling that you have accomplished something which is good and beautiful.

Weaving knows no age group, it is applicable to each grade, one thru twelve. From a simple beginning of cardboard frames and yarn, weaving develops into the more complicated world of table and floor looms.

Early weaving experiences in school revolve around bright colored yarns, strings of raffia, strips of paper and looms of cardboard or wood. As children weave, they marvel at the interesting textures which are created, they thrill at the color effects produced as color after color is pushed next to each other on the loom. Each experience adds to the development of a discerning sense of color, pattern and texture. As students progress from the simple to the complex, understandings develop of quality weaving, and they are challenged to even greater accomplishments in craftsmanship and design.

It has been pointed out that weaving does not require complicated expensive equipment. Simple inexpensive looms of wood or cardboard may be produced by the children. In high school the larger two and four harness looms are appropriate but not absolutely necessary. Students may have very satisfying experiences on the simplest equipment.

In the advanced high school grades basketry is frequently introduced as another avenue for weaving experiences. In this craft students design and weave unique baskets for many purposes. Reed and raffia are used almost exclusively for the process.

## *stitchery*

Who knows when an experience will stir the imagination of Johnny or Jane; could it be during a stitchery activity, as the bright colored threads are placed next to each other creating unique color effects, or when bits of cloth are stitched together forming beautiful patterns of shapes and textures? It might well be, that at this moment, the child will have the wonderful feeling of satisfaction which comes as their unique ideas begin to take visual form in thread and cloth.

Stitchery as a craft includes embroidery and applique experiences. The foundation for stitchery creations is usually a heavy woven fabric such as monk's cloth or burlap which has thread large enough to be counted easily.

Many and varied colored threads, yarns and strings find their way into the unique patterns which the students embroider into their creative stitchery projects. If the student decides on an applique technique, bits of cloths of all colors and textures are cut and shaped so they may be stitched into place on the burlap.

The principles of good design find new avenues for application as individuals participate in these activities. Adjustments may be made with little effort as various colors and shapes are placed in the pattern for consideration.





## *ceramics*

Ceramics is the art of making, firing and glazing objects of clay. In a comprehensive art program this craft includes instruction and experimentation in pottery, ceramic carving, ceramic modeling and casting.

From a soft pliable ball of clay the student forms an object which represents the unique idea which he wishes to express. As he adjusts the various parts of the clay form, moving a bit of clay to one side, pressing it here and there, a new form develops which has a life and meaning all its own.

Students begin the ceramics craft with a clay that has been processed in such a way that the internal air bubbles are removed and an even consistency is obtained.

This clay may be modeled, thrown on a potter's wheel, or allowed to dry and carved into practically any form the individual so desires. If copies of the object are needed, a plaster mold may be constructed of it so that one or more exact reproductions may be produced.

When the student has made the last adjustment to his creation, it is placed in a protected area where it may dry thoroughly at normal room temperature. The object is then heated or fired, as it is referred to in the ceramics industry, to a temperature of 1400° to 1900° and upwards depending upon the type of clay used. An oven called a kiln is used to obtain the necessary heat for firing the clay. After the object has been fired and cooled, powdered glass which may be colored or clear is applied to the object and it is fired again so that the glass will fuse to the clay in a smooth water proof finish.

Clay creations which otherwise might have had a very limited existence come from the ceramics kiln in a much more substantial and lasting form. Colors become bright and vivid under the layer of glass.

Children and adults alike thrill at the transformation which takes place as their dull colorless creations emerge from the kiln as bright glossy objects.



## *mosaics*

A mosaic is a picture or a design made of small pieces of colored glass, stone, glazed clay or other material. It is formed by inlaying the pieces on a board, wall or some type of substantial surface.

This craft had its beginning far back in history. Many early examples of this art have retained their original brilliance and luster because of the resistance the mosaic materials have to weather and light.

In the schools today this craft is practiced with a great variety of materials. Students might use pebbles, seeds, paper chips, bits of colored glass, pieces of glazed clay and many other objects which are found in and around the community.

This craft offers excellent opportunities for design experiences because quick adjustments are possible. The individual pieces may be moved freely until the desired arrangement of color and shape has been reached. Elementary children delight at the textures produced as the various materials are placed next to each other in a mosaic design. Students in advanced art programs have found mosaics a challenging experience because of the planning which is necessary to carry out a complete mosaic design from the production of small clay tiles to the final assembly of the pieces into the desired design.



## *applied textile design*

The decorating of textiles may be traced back among the Egyptians, Assyrians, and Chinese to remote ages. Similar methods which were used in those times are practiced in the school art programs of today.

These methods offer new avenues for the creative expression of students. Each is unique and may be adapted to the individual temperament.

Silkscreen printing, block printing and direct painting, three of the textile design methods, have already been discussed as individual processes in other sections of this bulletin. For textile design they are practiced in essentially the same manner, except a "fabric paint" is now used which leaves a fairly permanent color on the fabric.

Batik, another method of applying designs to fabrics, also dates far back in history. This method follows a particular pattern. First wax is applied to certain parts of a fabric which is then dipped into various dyes. When dipped, only the parts of the fabric unprotected by the wax take on the colors of the dye. The wax is then removed by placing the fabric between several sheets of newspaper and pressing it with an iron. Wax may then be applied to other parts to protect them as the fabric is dipped into a second color. This process may be repeated until the desired design is reached. The possibilities of batik are limitless, any number of interesting color and shape combinations may be created to satisfy the most demanding craftsman.

"Controlled Dyeing" is also used in applied textile design. The fabric in this case is held so that only the part which is to receive the color is dipped into the dye. In some instances the fabric is tied so the dye cannot be absorbed too readily. This produces a blended color effect. Occasionally this method is coupled with batik to extend the design possibilities.

## *jewelry*

As the student moves into a jewelry making experience he asks many questions; questions which relate to the special characteristics of the various metals that may be included in their unique jewelry designs. This question and many others reflect the inquiring approach which students employ as they move through creative experiences in jewelry making.

Beginning projects need only the simplest of tools. With a hammer, a piece of flat iron, a pair of pliers, a file, and some silver wire, elegant rings, bracelets and pendants may be constructed. As the program develops additional tools and equipment may be acquired which will widen the range of substances that may be included in the projects created by the students. These new substances would greatly increase the possibility of incorporating contrasting materials in unique jewelry designs.





## *metal enameling*

Metal enameling is the process of applying a finely ground glass to a metal surface and heating it until the glass fuses and bonds to the metal. The ground glass or enamel as it is referred to, is available in a variety of colors.

Briefly the process follows this pattern. A clean piece of metal, which is usually copper, is covered with enamel and placed in an oven called a kiln. This kiln has been heated to 1350°-1450° before the metal is inserted. After two or three minutes or when the enamels melt to form a smooth, glossy coating of glass on the metal, the piece is removed from the kiln and cooled at room temperature.

The resultant object now has a surface which has the permanence of glass and a glossy beauty which is responsible for much of the popularity of this craft.

## *metal smithing*

Metal smithing has to do with the shaping of metals of all types. In the art program this craft deals primarily with the beating of sheet metal into various objects. Copper and aluminum, two of the most popular metals used, respond beautifully to the hammer.

The student may take an uninteresting piece of copper and transform it into an elegant bowl or dainty ash tray. He begins by cutting the metal into a particular shape which is then placed against some object so that it may be hammered with short even strokes until the desired form is attained.

Various metal stakes, anvils, and woodblocks are available to aid in the shaping of the objects. A bag of sand has also been used as an aid with satisfying results.

The proud look on the face of a student who has just created a metal form, is evidence of the many possibilities which metal smithing has for creative expression.



## *leathercraft*

Leathercraft experiences revolve around a material which has benefited man since time began. Its value has only slightly diminished with the turning centuries; centuries which have seen it adorn the person of kings and the plows of peasants. It is only natural that the craft associated with this versatile material should continue to flourish in the art programs and in the shops of today.

In the schools, students have rich experiences shaping and stitching leather into many objects; objects which reflect their unique personalities. They are challenged by the many design possibilities which leather has as a material for functional articles. This substance, which is tough and durable, is also gentle in that it responds to the knife and the stipler, two instruments which are the mainstays of the leather craftsman.

In school art programs, steer hide and calf skin are used almost exclusively because of their availability. These leathers are usually of the "tooling leather" type which may be decorated if the student so desires. Tooling leathers have not been completely processed as are the leathers which we find in a finished belt or shoe. This fact makes it possible to stamp designs of all types into the dampened surface of the leather. Instruments titled stiplers are used for this process. These are pencil like metal objects with raised type designs on one end. The stipler is hammered into the leather with a mallet, leaving a permanent imprint on the surface. Many stiplers are available each with a different design on its end. These are used by the understanding student to create many unique and dramatic designs in the surface of his leather project.



*art  
activity  
introduction  
chart*

## *art activity introduction chart*

The chart below indicates the grade level at which the various art activities and associated materials have been introduced with the most success.

Since, children vary greatly as to their skill and understanding within a grade level, it is important that this chart be used only as a guide in planning and never as a strict rule to be followed.

ART AREAS	GRADE LEVELS											
	1	2	3	4	5	6	7	8	9	10	11	
<b>GRAPHICS</b>												
<b>BLOCK PRINTING</b>												
Stick, Potato	X	X										
Innertube, Cork, Cardboard			X	X	X	X	X					
Plaster					X	X	X	X				
Linoleum							X	X	X	X	X	X
Wood									X	X	X	X
<b>SILK SCREEN PRINTING</b>												
<b>ETCHING</b>												
<b>ENGRAVING</b>												
<b>LITHOGRAPHY</b>												
<b>DRAWING &amp; PAINTING</b>												
<b>DRAWING</b>												
Crayon	X	X	X	X	X	X						
Chalk			X	X	X	X	X	X	X	X	X	X
Stick-Brush-Pen & Ink				X	X	X	X	X	X	X	X	X
Pencil							X	X	X	X	X	X
Charcoal, Conte'							X	X	X	X	X	X
<b>PAINTING</b>												
Tempera Painting	X	X	X	X	X	X	X	X	X	X	X	X
Water Color Painting					X	X	X	X	X	X	X	X
Oil Painting												



THREE DIMENSIONAL ART MODELING	1	2	3	4	5	6	7	8	9	10	11	12
Clay	X	X	X	X	X	X	X	X	X	X	X	X
Experiment with Papier Mache', Plastic Wood, etc.					X	X	X	X				

CONSTRUCTIONS (Collages, Mobiles, etc.)	1	2	3	4	5	6	7	8	9	10	11	12
Paper	X	X	X	X	X	X	X	X	X	X	X	X
Papier Mache'			X	X	X	X	X	X	X			
Cardboard				X	X	X	X	X				
Wood				X	X	X	X	X	X	X	X	X
Wire				X	X	X	X	X	X	X	X	X
Metal									X	X	X	X

CARVING	1	2	3	4	5	6	7	8	9	10	11	12
Soap				X	X	X						
Clay				X	X	X	X	X	X			
Plaster Combinations					X	X	X	X				
Plaster					X	X	X	X				
Wood						X	X	X				
Stone									X	X	X	X
CASTING									X	X	X	X

ART APPRECIATION DESIGN	1	2	3	4	5	6	7	8	9	10	11	12
Industrial	X	X	X	X	X	X	X	X	X	X	X	X
Architectural											X	X
Community											X	X

CRAFTS	1	2	3	4	5	6	7	8	9	10	11	12
Weaving	X	X	X	X	X	X	X	X	X	X	X	X
Stitchery				X	X	X	X	X	X	X	X	X
Ceramics				X	X	X	X	X	X	X	X	X
Mosaics					X	X	X	X	X	X	X	X
Applied Textile Design						X	X	X	X	X	X	X
Metal Enameling						X	X	X	X	X	X	X
Jewelry								X	X	X	X	X
Metal Smithing									X	X	X	X
Leather Craft									X	X	X	X
Basketry									X	X	X	X

*Organization and  
Administration*



## *organization and administration of the art program*

A well functioning art program has many factors which contribute to its success. Educators agree that of these factors, the five listed immediately below are fundamental and need the upmost consideration if the maximum program values can be expected for the students.

- Understanding of program purpose
- Qualified personnel
- Adequate facilities
- Adequate time allotment
- Periodic evaluation

## *development of program understanding*

The development of program understanding has been most successful if it is a definite but unhurried process. Definite, in that certain periods of time are set aside, when the people who are concerned with the art program may discuss and plan together. Unhurried, in that sufficient time is given, so that each person may have the opportunity to express and incorporate their ideas into a unified plan of action for the program.

This process includes the development of understanding at the following levels: within the individual classroom, within the school and within the school system. Of the many methods and techniques which have been employed at the various levels to promote understanding, those listed below have been remarkably effective.

Within the classroom:

- Student-teacher discussions on the meaning of art to each individual.
- Student organized displays of art work in the classroom.
- Student sharing of art experiences which took place outside of class.
- Room parents discussion groups of program purposes.
- Regular sharing of students work with the parents.

Within the school:

- Faculty formation of school objectives for art program.
- Parent-Teacher meetings organized around the discussion of the curriculum areas.
- School art shows for the parents.
- Sharing of art work between rooms.
- Assembly periods featuring outside art personalities.

Within the school system:

- School representatives meeting to form system wide objectives for art education.
- System wide art shows and art process demonstrations which are open to the public.
- Adult art classes in the evening or on Saturday.
- Articles in the local newspaper discussing art program aims and objectives.
- In-service days devoted to art experiences for teachers.

The development of program understanding cannot be over-emphasized, for the degree of program value is in direct proportion to the degree of understanding which is developed.

## *qualified personnel*

What is a qualified art teacher? Three definitions have been offered which seem to represent the thinking of the majority of the people interested in art education.

These definitions in each case paint a rather definite picture of the person who would be needed to successfully guide an active and vital art program.

One picture is of a person who might be titled the "Artist Teacher." This person is first an artist; an artist who must continually have creative art experiences if he hopes to effectively guide the creative experiences of others. This person has a definite standard by which he judges his own work and the work of his students. This person believes that only through rigorous and controlled activities can an individual discipline himself so he may move forward to greater things. This person emphasizes the accumulation of facts and the development of skills. This person is only capable of guiding students to a level which he himself has attained.

The next picture is of a person who might be titled, "Teacher of the Child Through Art." This person feels that personal creative art experiences are not necessary. He satisfies this need by sharing the creative experiences of his students. This person's standards relate



to the apparent degree of satisfaction which the students receive from art experiences. This person feels that discipline would seriously curtail the creative expression of the students. This person feels that the accumulation of facts and the development of skills is secondary to the need for activities which will insure a satisfactory experience for his students. This person must have the ability to stimulate individuals to move into many and varied art experiences.

These pictures of art educators represent extreme over simplifications of two complex groups of theories related to how people learn and develop. The liberty has been taken to present these illustrations in order that a clearer picture may be formed of the person who has been the most effective teacher in the twelve grade art program which aims to provide equal opportunities for all children.

This person while having many creative art experiences does not feel these experiences are all-important to his ability to guide the creative experiences of others. This person has standards which vary as the students abilities vary and he refers to them only as a means to challenge his students to operate at their maximum capabilities. This person believes that the student's art activities should relate directly to the student's interest and that discipline contributes to creative development only when it is discipline imposed by the student himself. This person believes that understandings and skills are important but that they should develop as the student has experiences which have real personal meaning. This person would be able to guide students to far greater accomplishments than he himself has attained.

Every person recognizes the importance of having a well qualified teacher directing the educational programs in the schools of Kentucky.

The State Board of Education in fulfilling its obligation to the children in the art programs of the state has adopted certain certification requirements for those individuals who plan to assume the role of art teacher or art supervisor in the State of Kentucky. The requirements may be summarized as follows:

In order to be certified for teaching art at the high school level, a person must have completed the four year preparation program for secondary school teaching with an area of concentration, a major or a minor in art. A person who has completed the four year preparation program for teaching other high school subjects may have art added to the certificate after completing a recognized major or minor in art at a standard college.

At the elementary school level a teacher who has completed the four year preparation program for elementary teachers may serve as a full time art teacher upon completion of a recognized major or minor in art.

There are also auxiliary plans whereby a teacher who is certified for teaching art at either the high school level or the elementary school level may take additional courses and be certified for teaching art on a twelve-grade basis.

In order to be certified as an art supervisor a person must have completed the required courses for general supervision and must have had sufficient preparatory courses in art.

## *personnel responsible for the art program*

The implementation of the school art program in Kentucky is directly in the hands of the regular classroom teacher and the special art teacher. These educators have the responsibility of guiding the many and varied art experiences which are included in a vital and active art program. While the specific duties of these persons will vary with each teaching situation, because of the particular needs of the local school districts, their general responsibilities are basically the same. This is true because of the similarities of program purpose and school organization within the state's school districts.

## *the regular classroom teacher's responsibility*

The regular classroom teacher in the elementary grades has the responsibility for the total program in which his students participate. Art, like the other curriculum areas which are titled "special" is considered as much a part of this total responsibility as are reading, writing, and arithmetic. The addition of a special art teacher to the staff of an elementary school in no way lessens this responsibility, but it provides a richer program as the special art teacher and the classroom teacher plan meaningful creative art experience for the children.

In the majority of Kentucky's schools, the classroom teacher does not have the help of a special art teacher. This situation has raised the oft-repeated question, "Can a classroom teacher with a minimum number of semester hours in art effectively guide his children in the necessary art experiences?" It is the opinion of many educators that he can. The skillful classroom teacher tries to understand the purposes of a creative art program, he becomes familiar with the methods of implementing these purposes, and he makes every effort to understand the creative growth pattern of his students.



## *the special art teacher*

The responsibility of the art teacher varies to a slight degree in relation to the situation in which he is teaching. In the elementary grades the art teacher has a dual responsibility of teaching children and planning with the classroom teacher. The first day the art teacher enters the classroom, a partnership is formed. Two individuals, the classroom teacher and art teacher, pool their efforts to make meaningful experiences for the children. This relationship continues throughout the year as plans are made and activities progress. The art teacher is ever sensitive to the particular needs of each group as he moves from classroom to classroom.

The secondary art teacher's responsibility is more closely related to the individual student's needs and interests. He is charged with stimulating, encouraging and challenging each student with whom he works. Individual instruction is offered whenever possible, and he promotes self evaluation on the part of each individual.

## *the itinerant art teacher*

The itinerant art teacher's responsibilities are identical to those of the regular art teacher. Since this person's services are shared by several schools, it is extremely important that the allotment of his time receive special consideration. It is recommended that he spend a minimum of forty five minutes, every two weeks, with each class. Any less time would seriously reduce his effectiveness as an art educator.

## *the art supervisor*

The art supervisor, although not directly engaged in the teaching of art, plays a vital role in the art program. He has the responsibility of coordinating the various activities which are designed to promote better understanding of art objectives, art processes and teaching techniques. He acts as an art consultant to faculty groups, parent groups, building committees, curriculum committees and individuals. He is a source of information related to art materials, equipment and publications.

In fulfilling his role as art supervisor, he may demonstrate teaching techniques, conduct workshops or art classes for teachers and publish informative art bulletins.

Because of the scope of his duties, the art supervisor is better able to understand the total educational program in a district and seek a proper balance for art education.

## *the administrator*

The administrator is a key figure in the art program, as he is in the other areas of the curriculum. Upon his judgment the art teacher is recommended to the local board of education for placement in the art program. He is responsible for allotting the necessary funds to house, equip and supply the program, so that it may function in a manner which offers maximum benefits for all students.

Through his encouragement cooperative planning in relation to system-wide art education objectives and objective implementation becomes a regular part of the systems curriculum improvement program.

In the individual schools, the principal, as the chief administrator, encourages his faculty to continually evaluate their teaching methods and program content in relation to the objectives for the art program. He provides the necessary time for teacher conferences with the art consultant in order that the two may plan more meaningful art experiences. He insures an equitable allotment of the instructional supplies for the many and varied art activities which are included in the art program.

## *adequate facilities*

The acquisition of appropriate materials, equipment and space is of prime importance to an active art program. Special consideration should be given the adaptability of the various pieces of art equipment especially since many types serve several purposes. Recent trends in art room furniture design, for example, are emphasizing general purpose features which make it possible to adapt tables, stools and cabinets to meet the needs of many art activities. Printing presses are now available which may be adapted to print, linoleum blocks, etching plates or lithograph stones with equal satisfactory results. There are inexpensive white drawing papers on the market which may be used for any of the following art media; tempera paint, watercolor paint, crayons and chalk.

The added time given for a careful analysis of program needs in relation to available equipment and materials will pay many dividends to the local school system.

The following sections discuss the general space and equipment needs in the elementary and high schools. It should be pointed out that many of the needs mentioned are bare minimums which should have more consideration as the art program develops.



## *space and equipment needs in the elementary school*

The regular classroom provides adequate space for the successful completion of most of the art activities in the elementary school. There are some projects, however, which require more space; this space may be found in other sections of the school such as the gym, the stage or on the school grounds.

The standard classroom furniture may be adapted to provide special work surfaces for many of the art activities. Chairs may be placed in such a way so as to support drawing boards. Painting paper may be taped or tacked to the wall or backboard for more convenient working conditions. The floor in many cases is an excellent surface for large projects of all types.

Even in the most limited situations there are many items which may be adapted to the art program in order that children might have rich and vital creative experiences.

It should be pointed out that even though these adaptations are possible, they require effort on the part of the teacher, an effort which could be well spent on instruction if the system could afford more appropriate equipment.

A goal for Kentucky's schools is to provide the necessary facilities for all programs in all schools. There has been much discussion related to a special activity room in the elementary schools, a room of greater than average size which would be available when the class needs more space for some of their large projects. This room would have a collection of basic hand tools plus several heavy work benches which are not found in the regular classroom. It would also be an ideal place for the storage of certain materials which are needed for special projects. Room scheduling and maintenance would be a problem but with a little effort an equitable arrangement could be reached that would insure equal opportunities for all teachers to use the facilities.

## *space and equipment needs in the high school*

The high school art room houses the many activities which form the art program. These activities include various processes which have definite space and equipment needs. In the following paragraphs an effort has been made to briefly discuss and identify these needs.

### ***pupil work space***

Each student needs sufficient space to work on independent projects of a flat or three-dimensional nature. These would include drawing, painting, carving, modeling and small constructions. Experience has shown that at least 50 square feet of space per student is necessary for the successful participation in these activities.

### ***space for special equipment***

In addition to the room needs for the special equipment, there should be sufficient space adjacent to the equipment for the preparatory and finishing steps of the process in which the equipment is involved. For example, near the kiln used in ceramics, storage shelves are needed for drying the clay projects in order that they may be fired, and other space is necessary to hold the fired and glazed projects after they are removed from the kiln.

### ***storage space for materials and tools***

The art program uses a wide variety of materials and many tools which need special space consideration. Papers and cardboards, which may be 28" by 44" in size, need flat dust free compartments. Paints, brushes, inks, chalks should have space which is readily accessible to the students. Wet clay required a compartment which is water proof and reasonably air tight so that it will remain pliable and ready for use. The carving materials which vary in size and weight need appropriate storage places as do the many and various art tools.

### ***storage space for student work***

Many of the art activities in which high school students engage require much more time than that which is available in a single class period. As a result of these extended activities, storage space is necessary for the in-process projects of the students. Since the projects range from small flat pieces to relatively large three dimensional objects, it is important that storage spaces be of sufficient size to accomodate a variety of types.

### ***adequate lighting***

An abundance of natural light is necessary in the art room. This is especially important for painting projects since many available artificial light sources tend to emphasize certain colors causing distortions in the color relation judgments of the students.



### *water source and cleaning space*

A sink with hot and cold water is needed for cleaning equipment, tools, and hands. It should have at least two faucets; one which mixes hot and cold water, and one which is high enough, that a standard bucket may be placed beneath it. There should be drain surfaces on either side of a large sink basin. The water from the basin should drain through a trap which may be easily cleaned of accumulated plaster, sand, oils, and grease.

### *sufficient electrical service*

Several electrical outlets placed at strategic places in the art room are necessary since certain pieces of electrical equipment, such as soldering irons, kilns, projectors, play very active roles in the class activities. The kiln needs special consideration; it frequently operates on 220 volts, at a load rating of ten to thirty amperes. Every effort should be made to anticipate the electrical service needs of the art room while it is under construction. Later additions may prove to be rather expensive.

### *adequate tack boards and chalk boards*

Tack boards are used for both display and work surfaces. The installation of tack board from floor to ceiling provides an excellent space for the completion of large drawing and painting projects. It may also support a display of current student work.

Usually a regular ten to twelve foot chalk board is sufficient to meet the needs of the art program. It should be placed adjacent to the teachers desk or demonstration table, so that it may be seen from each student work position.

The needs discussed in the previous paragraphs were identified in order to assist local school districts in designing effective art rooms for their particular situations. Each need which was identified is indispensable to a well functioning art program; therefore, every consideration should be afforded them as art room layouts are made for future buildings and remodeling plans are prepared for present structures.

## *time allotment for the art program*

In the Elementary School:

In the elementary school it is recommended that 120 minutes per week be the very minimum time allotted for the elementary art program. Forty-five to sixty minutes of this time would be used for instruction in specific art techniques while the remaining 60 or 75 minutes would be used for correlated art experiences or for free creative expression by the students.

In the High School:

In the high school, an art class offering one unit in art would meet one school hour, five days per week for the school year. The student in this program would be expected to complete a reasonable amount of outside work for each hour in class.

In addition to the regular art class it may be advantageous to offer a unit of art over a two year period for those students who have only a general interest in art. This class would meet half the normal time for one half unit per year. A class operating under this plan may meet an alternating schedule of three days one week, two days the next, and so on through the school year. Other schedules are possible which would also equal a half year's work.

## *periodic evaluations*

Evaluation is extremely significant to the art program which hopes to continue to meet the needs of all children. It is an avenue by which objectives may receive justifiable revisions and teaching procedures and techniques may be studied for their effectiveness. Through evaluation new program needs are identified, needs which if satisfied, may increase the value of the program tremendously.

Local districts would benefit greatly if they would establish regular periods when each area of the curriculum is carefully evaluated in terms of its purpose. This responsibility is shared by staff members, parents and children. Each has a unique point of view to offer, which will strengthen any plan of action which follows.



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# *Resource Materials*

## *resource materials*

In an active and vital art program resources of all types play an important role as students and teachers move deeper and deeper into the many and varied art experiences.

The following lists of publications and dealers and manufacturers of art materials, tools, and equipment were identified by educators as those which have been most useful as sources of information related to their art programs.



## *bibliography*

The books have been divided into three categories to facilitate the selection of publications which will meet a specific need.

The books in the following group are of the comprehensive type in that they deal with the philosophy of art education, the scope and sequence of art programs and specific information related to art materials, techniques, and processes.

- ART EDUCATION DURING ADOLESCENCE* Charles & Margaret Gaitskell. Hartcourt Brace Co., New York, 1954. 116 pp.
- AN INTRODUCTION TO ART EDUCATION* Ralph L. Wickiser. World Book Co., Yonkers on Hudson, New York, 1957. 342 pp.
- ART FOR THE SCHOOLS OF AMERICA* Harold Gregg. International Textbook Co., Scranton, Pennsylvania, 1941. 197 pp.
- ART IN THE ELEMENTARY SCHOOL* Harold Schultz & Harlan Shores. University of Illinois, Urbana, Illinois, 1948. 102 pp.
- ART IN THE SCHOOLROOM* Manfred L. Keiler. University of Nebraska Press, Lincoln, Nebraska, 1955. 230 pp.
- ART EDUCATION FOR SLOW LEARNERS* Charles & Margaret Gaitskell. Charles A. Bennett Co., Inc., Peoria, Illinois, 1953. 46 pp.
- ART EDUCATION IN KINDERGARTEN* Charles Gaitskell. Charles A. Bennett Co., Inc., Peoria, Illinois, 1952. 40 pp.
- ART EDUCATION, ITS MEANS AND ENDS* Italo L. De Francesco. Harper and Brothers, New York, 1958. 640 pp.
- CHILDREN'S ART EDUCATION* Knudsen and Christensen. Charles A. Bennett Co., Inc., Peoria, Illinois, 1957. 208 pp.
- CREATIVE TEACHING IN ART* Victor D'amico. International Textbook Co., Scranton, Pennsylvania, 1953. 257 pp.
- EARLY ADOLESCENT ART EDUCATION* Carl Reed. Charles A. Bennett Co., Inc., Peoria, Illinois, 1957. 205 pp.
- EXPLORING ART* Kainz & Riley. Harcourt, Brace and Co., Inc., New York. 267 pp.
- MEANINGFUL ART EDUCATION* Mildred M. Landis. Charles A. Bennett Co., Inc., Peoria, Illinois, 1957. 199 pp.
- TEACHING ART IN THE ELEMENTARY SCHOOL* Margaret H. Eret. Rinehart and Co., Inc., New York, 1954. 284 pp.
- THE ARTS IN THE CLASSROOM* Natalie R. Cole. The John Day Co., New York, 1940. 137 pp.

This group of books deal more specifically with the art techniques and processes.

- A WORLD HISTORY OF ART* Sheldon Cheney. The Viking Press, Inc., New York 22, New York, 1937.
- ADVENTURES IN STITCHES* Marish Karasz. Funk & Wagnalls Co., New York, 1949.
- ART IS EVERYWHERE (A Child's Guide to Drawing and Painting)* Leonard Kessler. Dodd, Mead & Co., New York, 1958. 88 pp.
- BLOCK CUTTING AND PRINT MAKING BY HAND* Margaret Dobson. Sir Issac Pitman and Sons, Ltd., London, 1930.
- BLOCK PRINTING CRAFT* Raymond W. Perry. Manual Arts Press, Peoria, Illinois, 1939.

- BLOCK PRINTING ON FABRICS* Florence H. Pettit. Hastings House, New York, 1952.
- COMPOSING IN SPACE* Richard G. Wiggin. McKnight & McKnight, Bloomington, Illinois, 1955.
- CREATING WITH PAPER* Pauline Johnson. University of Washington Press, Seattle, Washington, 1958.
- CREATIVE EXPRESSION WITH CRAYONS* Elsie R. Boyleston. The Davis Press, Worcester, Massachusetts, 1953. 99 pp.
- CREATIVE HANDS* Barbara, Doris and Warren Cox. John Wiley and Sons, Inc., New York, 1951. 381 pp.
- CREATIVE CRAFTS IN EDUCATION* Seonaid M. Robertson. Robert Bentley, Inc., Cambridge, Massachusetts, 1956. 286 pp.
- CERAMIC SCULPTURE* John B. Kenny. Greenberg Publisher, New York, 1953. 302 pp.
- CERAMIC REFERENCE MANUAL* Glenn C. Nelson. Burgess Publishing Co., Minneapolis, Minnesota, 1957. 127 pp.
- COLLAGE AND CONSTRUCTION IN ELEMENTARY AND JUNIOR HIGH SCHOOLS* Lois Lord. Davis Publications, Inc., Worcester, Massachusetts, 1958. 111 pp.
- DESIGN THIS DAY* Walter D. Teague. Harcourt, Brace Co., New York 17, New York, 1940.
- ENAMELING* Kenneth F. Bates. World Publications Co., Cleveland, Ohio, 1951. 203 pp.
- ETCHING AND OTHER GRAPHIC ARTS* George T. Plowman. Dodd, Mead, and Co., New York.
- EXPLORING PAPER MACHE* Victoria Betts. The Davis Press, Worcester, Massachusetts, 1955. 134 pp.
- GRAPHIC DESIGN* Leon Friend and Josephine Heffer. Whittlesey House, New York, 1936.
- HANDBOOK OF SILK SCREEN PRINTING PROCESS* Harry Summer. Creative Crafts Press, New York, 1939.
- HANDCRAFTS FOR ELEMENTARY SCHOOLS* F. C. Moore, C. H. Hamburger, A. L. Kingzett. D. C. Heath and Co., Boston, Massachusetts, 1953.
- HANDLOOM WEAVING* F. J. Christopher, revised by Lili Bhemenu. Dover Publications, Inc., New York, 1954.
- HOW TO MAKE MODERN JEWELRY* Charles J. Martin and Victor D'Amico. Museum of Modern Art, New York 19, New York, 1949.
- HOW TO MAKE POTTERY AND CERAMIC SCULPTURE* Julia H. Duncan and Victor D'Amico. Museum of Modern Art, New York, 1947. 99 pp.
- INDUSTRIAL DESIGN* Harold Van Doren. McGraw-Hill Book Co., Inc., New York 36, New York, 1940.
- JEWELRY MAKING AS AN ART EXPRESSION* Kenneth D. Winebrenner. Laurel Bros., Publishers, Scranton, Pennsylvania, 1953. 181 pp.
- LINOLEUM BLOCK PRINTING* Francis J. Kafka. McKnight & McKnight Publishing Co., Bloomington, Illinois, 1955.
- MAKING A LITHOGRAPH* Stow Wengenroth. Studio Publications, Inc., New York 16, New York, 1936.
- MAKING AN ETCHING* Leon West. The Studio Publications, Inc., New York, 1932.



- MASK MAKING: *CREATIVE METHODS AND TECHNIQUES* Matthew Baranski. Davis Publications, Inc., Worcester, Massachusetts, 1954.
- MOBILE DESIGN John Lynch. Thomas Y. Crowell Co., New York, 1955.
- MURALS FOR SCHOOLS Arne W. Randall. Davis Press, Inc., Worcester, Massachusetts, 1956. 100 pp.
- NEDDLECRAFT HANDBOOK Mildred Ryan. Arco Publishing Co., New York, 1954. 144 pp.
- NEW KEY TO WEAVING Mary Black. Bruce Publishing Co., Milwaukee, Wisconsin, 1957.
- ON JUDGING WORKS OF VISUAL ART Conrad Fiedler. University of California Press, Berkeley and Los Angeles, 1957.
- PAPER FIGURES Anna E. Pauli & Margaret S. Mitzit. Charles A. Bennett Co., Inc., Peoria, Illinois, 1957. 102 pp.
- PAPER, INK AND ROLLER PRINT MAKING FOR BEGINNERS Harvey Weiss. William R. Scott, Inc., New York, 1958. 64 pp.
- PAPER SCULPTURE AND CONSTRUCTION J. V. Miller. Charles A. Bennett Co., Inc., Peoria, Illinois, 1957. 56 pp.
- PAPER SHAPES AND SCULPTURE Mary Grace Johnston. Davis Publications, Inc., Worcester, Massachusetts, 1958. 70 pp.
- PICTURE FRAMING Edward Landon. American Artists Group, Inc., New York, 1945. 149 pp.
- PRIMER OF DRAWING Howard Simon. Sterling Publishing Co., Inc., New York, (R.E. C 1958) 135 pp.
- SILK SCREEN COLOR PRINTING Harry Sternberg. McGraw Publishers, New York, 1942.
- SILK SCREEN PRINTING James Eisenberg. McKnight & McKnight Publishing Co., Bloomington, Illinois, 1952.
- THE ARTIST'S HANDBOOK OF MATERIALS AND TECHNIQUES Ralph Mayer. The Viking Press, Inc., New York, 1940. 561 pp.
- THE ART OF MAKING MOSAICS Barbara, Louisa and Mills Jenkins. D. Van Nostrand Co., Inc., Princeton, New Jersey, 1957. 160 pp.
- THE COMPLETE BOOK OF POTTERY MAKING John B. Kenny. Greenberg Publisher, New York.
- THE GRAPHIC ARTS Joseph Pennell. University of Chicago Press, Chicago, 1921.
- THE GRAPHIC ARTS William H. Johnson and Louis V. Newkirk. The MacMillan Company, New York, 1948.
- THE NATURAL WAY TO DRAW Kimon Nicolaides. Houghton Mifflin Co., Boston, 1941. 221 pp.
- THE SILK SCREEN PRINTING PROCESS Jacob Israel Biegeleisen. McGraw-Hill Book Co., Inc., New York, 1941.
- THE STUDY OF ARCHITECTURAL DESIGN Harlan McClure. Burgess Publishing Co., Minneapolis 15, Minnesota, 1949.
- TOWN DESIGN Frederick Gibberd. Reinhold Publishing Corp., New York 22, New York, 1953.
- WOOD CARVING Charles G. Loland. Pitman Publishing Company, New York, 1931.
- WOODCUTS John R. Biggs. Sterling Publishing Co., Inc., New York, 1958, 176 pp.

The books in this group are primarily concerned with art theory and creative growth characteristics.

*ART EDUCATION FOR SLOW LEARNERS* Charles & Margaret Gairish. Charles A. Bennett Co., Inc., Peoria, Illinois, 1953. 46 pp.

*ART EDUCATION IN THE KINDERGARTEN* Charles & Margaret Gairish. Charles A. Bennett Co., Inc., Peoria, Illinois, 1952. 40 pp.

*CHILDREN AS ARTISTS* R. R. Tomlinson. The Penguin Books, Baltimore, Maryland, 1947. 32 pp.

*CHILDREN'S ART* Mildred Lindstrom. University of California Press, Los Angeles, 1957. 95 pp.

*CHILDREN ARE ARTISTS* David M. Mendelowitz. Stanford University Press, Stanford, California, 1953. 371 pp.

*CHILDREN AS ARTISTS* R. R. Tomlinson. King Penguin Books, London and New York.

*CREATIVE AND MENTAL GROWTH* Viktor Lowenfeld. The Macmillan Co., New York, 1953. 408 pp.

*CREATIVE TEACHING IN ART* Victor D'Amico, International Text Book Co., Scranton, Pa., 1953. 257 pp.

*EDUCATION IN ART* Edwin Ziegfeld. International Document Service, Columbia University Press, New York, 1953. 130 pp.

*EDUCATION THROUGH ART* Herbert E. Read. Pantheon Books, New York, 1946 (2nd edition). 320 pp.

*FOOTPRINTS AND NEW WORLDS* Temima Gezari. The Reconstruction Press, New York, 1957. 168 pp.

*MIND YOUR CHILD'S ART* Laura Bannon. Pellegrini & Cudahy, New York, 1955. 62 pp.

*THE ARTIST IN EACH OF US* Florence Cane. Pantheon Books, Inc., New York, 1951. 370 pp.

*VISION IN MOTION* Maholy - Nagy. Paul Theobald Publishing Co., Chicago, Illinois, 1947. 371 pp.

*YOUR CHILD AND HIS ART* Viktor Lowenfeld. The Macmillan Co., New York, 1954. 186 pp.

## *magazines*

*AMERICAN ARTIST*. 345 Hudson St., New York 14, New York, Watson-Gouffart Publications, Inc.

*ARCHITECTURAL FORUM*. Time and Life Building, Rockefeller Center, New York, New York.

*ART EDUCATION*. Journal of the National Art Education Association, Editorial Office, Art Department, State Teachers College, Kutztown, Pennsylvania.

*ART DIGEST*. Peyton Boswell, Editor. 116 East 59th St., New York, New York.

*ART AND INDUSTRY*. 381 Fourth Ave., New York 16, New York, Studio Publications, Inc.

*CRAFT HORIZONS*. 32 E. 52nd St., New York 22, New York, American Craftsmen's Educational Council, Inc.

*DESIGN*. 337 S. High St., Columbus, Ohio.

*ARTS AND ACTIVITIES*. 542 N. Dearborn Parkway, Chicago 10, Illinois, The Jones Publishing Co.

*MAGAZINE OF ART*. 22 East 60th St., New York 22, New York, American Federation of Arts.

*SCHOOL ARTS*. Printers Building, Worcester 8, Massachusetts, The Davis Press, Inc.



## *sources of art materials, tools and equipment*

### Dealers and manufacturers of general art materials.

American Art Clay Co., 4717 W. 16th St., Indianapolis 24, Indiana  
The American Crayon Co., 1706 Hayes Avenue, Sandusky, Ohio  
Binney & Smith Co., 41 E. 42nd St., New York 17, New York  
Milton Bradley Co., 74 Park St., Springfield, Massachusetts  
The Craftint Mfg. Co., 1615 Collamer Ave., Cleveland 10, Ohio  
M. Grumbacher, Inc., 460 W. 34th St., New York 1, New York  
Permanent Pigments, Inc., 2700 Highland Ave., Norwood, Cincinnati 12, Ohio  
Weber Costello Co., Chicago Heights, Illinois  
F. Weber Co., 1220 Buttonwood St., Philadelphia, Pennsylvania

### Dealers and manufacturers of general art tools and equipment.

Brodhead-Garrett Co., 4560 E. 71st. St., Cleveland 5, Ohio  
Craftools, Inc., 396 Broadway, New York 13, New York  
William Dixon, Inc., 32-42 E. Kinney St., Newark 1, New Jersey

### Dealers and manufacturers of craft materials, tools and equipment.

#### *Weaving and Stitchery*

American Reedcraft Corporation, 83 Beekman St., New York 38, New York  
The Bartlett Yarn Mills, Harmony, Maine  
Contessa Yarns, Ridgefield, Connecticut  
Lily Mills Co., Shelby, North Carolina  
Lion Brand Yarn Co., 1270 Broadway, New York, New York  
Thomas Hodgson & Sons, Inc., Concord, New Hampshire

#### *Ceramics and Mosaics*

Harrop Ceramic Service Co., 3470 E. Fifth Ave., Columbus 3, Ohio  
Immerman and Sons, 1924 Euclid Ave., Cleveland 15, Ohio  
Kiln-Card, 38 Normandy Rd., White Plains, New York  
Stewart Clay Co., 133 Mulberry St., New York 13, New York  
Tepping Studio Supply Co., 3517C Riverside Dr., Dayton 5, Ohio

#### *Leather Craft*

Arrow Leather Goods Mfg. Co., 1439 N. Halsted St., Chicago 22, Illinois  
Crown Leather Co., 22 Spruce St., New York 38, New York  
Dearborn Leather Co., 8625 Linwood Ave., Detroit 6, Michigan  
Mallory Leather Co., 185 E. Camino Real, San Bruno, California  
Tandy Leather Co., P. O. Box 791, Fort Worth, Texas

#### *Metal Enameling*

American Art Clay Co., 4717 W. 16th St., Indianapolis 24, Indiana

#### *Metal Smithing and Jewelry*

William Dixon, Inc., 32-42 E. Kinney St., Newark 1, New Jersey  
Hubbell Metals, Inc., 2816 Laclede Ave., St. Louis 3, Missouri  
Metal Crafts Supply Co., 10 Thomas St., Providence, Rhode Island  
Metal Goods Corp., 640 Rosedale Ave., St. Louis 12, Missouri

Dealers and manufacturers which specialize in particular types of art materials, tools or equipment.

*Brushes*

Bergen Brush Supplies, 110 Stuyvesant Ave., Lyndhurst, New Jersey  
Delta Brush Mfg. Corp., 119 Bleecker St., New York 12, New York

*Clay*

The Denver Fire Clay Co., 2301 Blake St., Denver, Colorado  
United Clay Mines Corp., 113 Oakland St., Trenton 6, New Jersey

*Cutters, Linoleum Block*

X-Acto Crescent Products Co., Inc., 440 Fourth Ave., New York 16, New York

*Furniture, Art Room*

Brodhead-Garrett Co., 4560 E. 71st St., Cleveland 5, Ohio  
E. H. Sheldon Equipment Co., Muskegon, Michigan  
Technical Furniture, Inc., Statesville, North Carolina

*Felt*

American Felt Co., Glenville, Connecticut

*Glues and Adhesives*

The Borden Co., Chemical Div., 350 Madison Ave., New York 17, New York  
The Ideal Paste and Chemical Co., 4516-18 Detroit Ave., Cleveland, Ohio

*Inks*

The Carter's Ink Co., 817 S. Victory Blvd., Burbank, California  
Higgins Ink Co., Inc., 271 Ninth St., Brooklyn 15, New York  
Sanford Ink Co., 706 S. 5th St., Champaign, Illinois

*Paints*

Palmer Show Card Paint Co., 21600 Wyoming Ave., Detroit 20, Michigan

*Paper and Cardboard*

Birmingham & Prosses Co., 10 E. 40th St., New York 16, New York  
Biefang Paper Co., Inc., Metuchen, New Jersey  
National Card, Mat and Board Co., 4318 Carroll Ave., Chicago 24, Illinois  
Strathmore Paper Co., West Springfield, Massachusetts

*Pencils*

General Pencil Co., 67 Fleet St., Jersey City 6, New Jersey  
Koh-I-Noor Pencil Co., Inc., Bloomsbury, New Jersey  
Swan Pencil Co., 211-5 Fourth Ave., New York 3, New York  
Venus Pen & Pencil Corp., Hoboken, New Jersey

*Scissors*

The Acme Shear Co., Bridgeport 1, Connecticut

*Pens and Pen Points*

The Esterbrook Pen Co., Camden, New Jersey  
C. Howard Hunt Pen Co., 7th and State Sts., Camden, New Jersey

*Silk Screen Supplies*

The Naz-Dar Company, 461 Milwaukee Ave., Chicago 10, Illinois

*Printing Presses*

Brodhead-Garrett Co., 4560 E. 71st St., Cleveland 5, Ohio



Dealers and manufacturers of art reproductions, slides, films and filmstrips.

*Reproductions*

Alva Studios, Inc., 140 West 22nd St., New York 11, New York  
Artext Prints, Inc., Westport, Connecticut  
Colonial Art Company, 1336-1338 Northwest First Street, Oklahoma City, Oklahoma.  
The Perry Picture Company, Box 400, Malden, Massachusetts  
Dr. Konrad Prothmann, 7 Soper Avenue, Baldwin, L.I., New York  
Skira Publishers, Inc., 381 Fourth Avenue, New York 16, New York  
University Prints, 15 Brattle Street, Harvard Square, Cambridge 38, Massachusetts

*Films*

Allend'or Productions, Inc., 607 North LeBrea Avenue, Los Angeles 36, California  
Contemporary Films, Inc., 267 West 25th Street, New York 1, New York

*Slides*

American Library Color Slide Co., Inc., 222 West 23 Street, New York, New York  
Arco Color Slides, Div. Modern Enterprises, Box 455, Van Nuys, California  
Detroit Institute of Arts, Detroit, Michigan  
Metropolitan Museum of Art, New York City, New York  
National Gallery of Art, Washington, D.C.  
Rochester Institute of Technology, School of art and Design, 65 Plymouth Ave., South Rochester 8, New York

*Filmstrips*

Bailey Films, Inc., 6509 De Longpre Avenue, Hollywood 28, California  
Text-Film Dept., McGraw-Hill Book Co., 330 W. 42nd St., New York 36, New York

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