ART I: UNIT EIGHT
PRINTMAKING

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PRINTMAKING

Printmaking is an extremely old and very popular form of art, involving the creation of multiple duplicates of a piece of art. It is one of the few arts that is used as both a form of fine art, commercial art and as an applied or industrial art.

Printmaking began in Asia thousands of years ago, in two main ways. The first was the form of **Gyo-Taku**, or Oriental Fish Rubbing. Chinese fishermen would paint ink on a fish and then press paper on it to preserve the image and record the days catch. Printing was also used to glaze pottery. A cloth stencil (most often made of silk, hence the name *Serigraphy*, which means *to draw on silk* or as it is commonly known, silkscreen printing) was used to paint the glaze on the pots, insuring that many pots could be made with an identical design.

AN EXAMPLE OF *GYO-TAKU*.
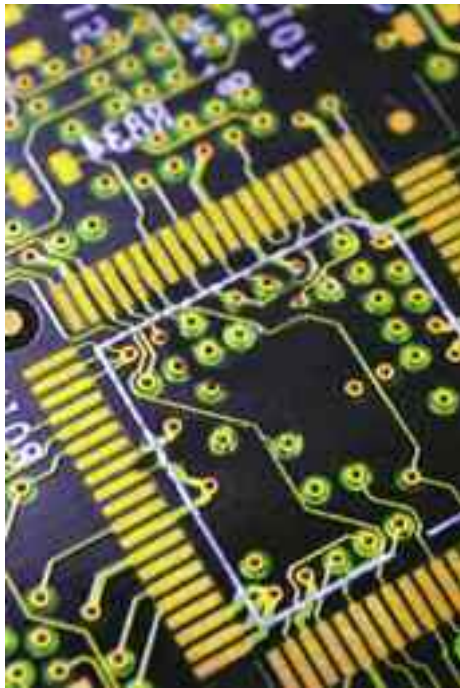
CIRCUIT BOARD

Printmaking became popular with the Industrial Revolution, as a means of mass production of all sorts of materials. It remains popular even today, especially in the computer and electronics industries, where serigraphy is used to create circuit boards.

Screen-printing is probably most well known for its use on printed T-shirts and hats. Chances are you are wearing an article of clothing right now that has a screen-printed image on it.

Screen-printing was first used as a form of fine arts in the 1920s, by an artist named Anthony Velonis. Velonis used screen-printing to create posters and prints, and even today it is still used to reproduce limited edition fine art prints and posters. 60s Pop icon Andy Warhol popularized the medium. Warhol created art from common, everyday objects which reflected the culture at the time. He felt the industrial/commercial aspects of screen-printing, as well as its emphasis on mass production, lent itself to his work and made it a medium that reflected the attitude of the time. Some examples of Warhol's silkscreen images are on the following page.

Although serigraphy is probably the most common and well-known form of printmaking, there are many other methods of creating multiple, identical images. We will explore many of these processes in this Unit.

There are three main types of printing processes, and each has its own unique look and characteristics. Professional printmakers and illustrators need to be well-versed in all the three types because certain designs are more easily rendered in one type than in another.

The first type of printmaking, and probably the easiest to work with is called **relief** printing. In a relief


WARHOL'S *BIG ELECTRIC CHAIR,* ©2000, ANDY WARHOL FOUNDATION FOR THE VISUAL ARTS/ARS, NEW YORK.

print, the image is printed from a raised surface. The image would be drawn on a piece of wood or linoleum for example, and the background removed. The image would then have ink painted or rolled onto it, and either be pressed onto a surface, or have the surface pressed onto the block. Where the background cannot come into contact with the surface, it remains clean and free of ink. Where the raised area comes into contact with the surface, the ink is deposited and an image is produced. This is the process by which rubber stamps work.

RELIEF PRINTING PLATE
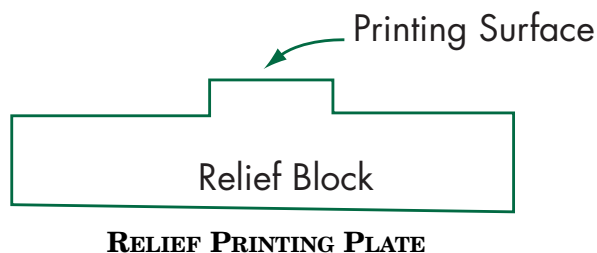
WARHOL'S *GREEN COCA-COLA BOTTLES* ©2000, ANDY WARHOL FOUNDATION FOR THE VISUAL ARTS/ARS, NEW YORK.

The second type is the opposite, called **intaglio** printing. In an intaglio print, the lines of an image are carved into the printing surface. Ink is then smeared across the surface and forced into the grooves. The surface is wiped clean, leaving the ink in the depressions only. When pressure is applied
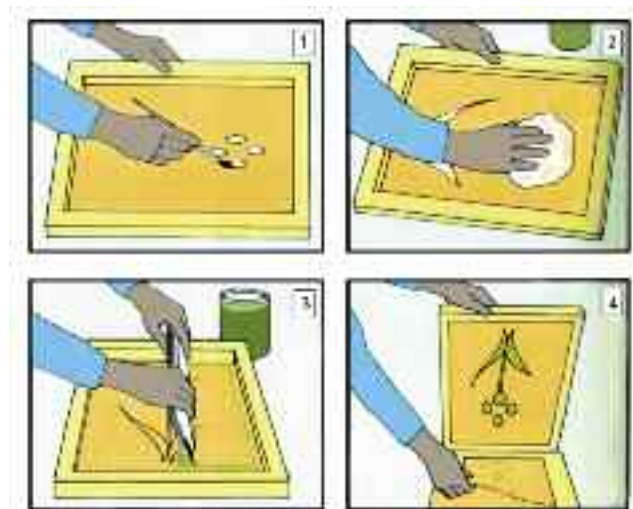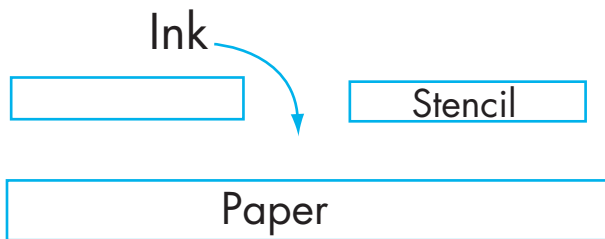

STEPS USED IN THE SILK SCREEN PROCESS
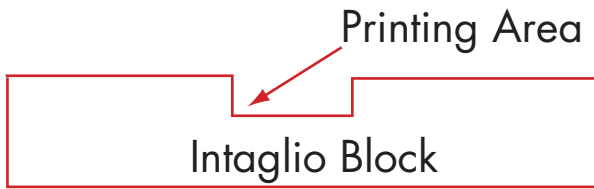
INTAGLIO PRINTING PLATE

to a paper or other object which is placed on this surface it forces the paper into the grooves, where it picks up the ink. When the paper is peeled away, the inked lines remain on its surface.


STENCIL PRINTING PLATE

The third type of printing process is the **stencil** process. In this process, a hole or opening is cut into a piece of solid material. When this stencil is placed in contact with a surface, and ink is dabbed or drawn across it, the ink will only be applied to the surface through the cut away opening, leaving the shape of the opening on the surface to be printed.

The final printing process is called **planographic** printing, and is a chemical process. The plano-
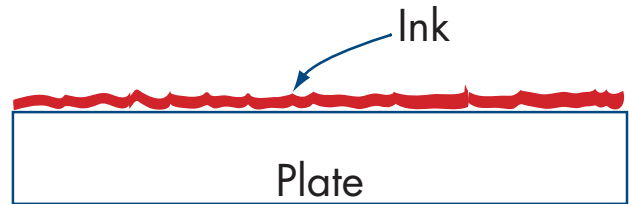
PLANOGRAPHIC PRINTING PLATE

graphic process involves treating a surface or **plate** so that it is water repellent in certain areas. When the surface is covered with water, printing ink will not stick to the water, but will stick to the water-repellent areas. When a paper is pressed onto the surface, the ink is transferred to the paper, creating an image.

We will explore the first three areas of printing in the following examples:

The activities in this Unit will be of two types. The first will be experiments in media, wherein the process will be explained and it will be up to the student to create a design that will be printed. This allows a higher degree of creative freedom, but can result in some frustration if the student is a bit insecure in the area of idea generation. To help with this, some of the activities will also have an added intellectual challenge. This will encourage the student to create design work that meets certain criteria, and will force them to use good problem-solving skills and thinking processes.

If the parent or teacher wishes to add this intellectual challenge to all the project activities, or to emphasize a particular problem solving skill, guidelines and ideas for creative design problems are included in the teachers guide. These are structured to encourage flexible, creative thinking and yet allow the highest degree of creative freedom and possibilities for self-expression. Parents and teachers should feel free to use these project ideas in this, or any of the previous Units, as a substitute for other ideas or assignments or as additional supplementary work.

Read these objectives. The objectives tell you what you should be able to do when you have successfully completed this Unit.

When you have finished this Unit, you will:

1. Understand a new aspect of fine art: printmaking.

2. Have observed some crossover between fine and applied arts.

3. Understand the concepts of multiple images, limited editions, and posters.

4. Have acquired a working knowledge of different printmaking techniques.

5. Understand the link between past and present, in terms of artistic process.

In the space provided below, write what you think you will learn from this Unit, what you would like to learn, and why you are interested in this topic.

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Note: All vocabulary words in this Unit appear in **boldface** the first time they are used. If you are unsure of the meaning when you are reading, study the definitions given.

I. STENCIL PRINTING

We will begin our printmaking experiments with an examination of several methods of stencil printing. Stencil printing is perhaps the simplest to produce as well as to understand and visualize.

Stenciling is an art form that has been used almost as long as man has been creating art. The earliest known drawings, in the caves of Lascaux, France, show a person's hand used as a stencil, with paint applied to the wall around it. There are two types of stencil printing, block-out and cut-out. Both of these types will be explored in-depth.

EXAMPLES OF CAVE PAINTINGS, LASCAUX CAVE, FRANCE

Activity 1.1—Block-out Stencil Printing

For this activity you will need a 12 x 18 sheet of white drawing paper (or construction paper if a colored background is desired) and spray paint.

Select several objects of differing sizes and shapes. A group of leaves, from different types (or the same as long as they are different sizes) of plants, washers, nuts and bolts, lace, feathers or other types of objects. Often, three-dimensional objects can act as interesting stencils, things like springs, nuts and other foodstuffs, bottles and materials like dirt or sand (which can be pushed around to create patterns).

 You will want to be sure that any objects you use are "disposable" as paint will get on them and will be very difficult, if not impossible to remove. When using spray paint, it is also important to wear a dust mask, and to spray in a well-ventilated area or outdoors. The fumes from spray paint can be hazardous if inhaled, and will carry for quite a distance.

FIGURE 1

Arrange a couple of the objects on the paper. You may need to weigh them down with some nuts, bolts or coins to insure good contact with the paper. From directly above, and a distance of no less than 12 to 14 inches (see figure 1), lightly dust the paper with a color of your choice.

START WITH A DOILY.

When the paint is dry (spray paint dries very quickly in light coats), remove the objects and observe the outline. Now place more objects over this design and repeat the process. Do this several times until the pattern is pleasing to the eye.

In this particular exercise, there are several factors the artist has to weigh in creating a pleasing overall design. The overall appearance should be well composed (focal point, balance, negative space etc.), remember that color can also affect the composition. The artist will need to consider the size of the objects, in relation to each other and to the paper.

The shape, size and thickness of the paint will also be a factor, as the over-spray will become a visible shape. The order in which shapes become dusted with paint will also be important, as this will create areas that are open or clear of paint and areas that will have one or more layers of paint on them. Visually, this will create even more shapes, which will in turn alter the composition (especially in terms of focal point and balance).

As you work and consider these factors, you will see what at first is an interesting experiment in media, becomes a quite challenging design problem.

The reverse of the block out technique is the more traditional and better known stencil technique. In this method, the design is cut out of a sheet of paper or plastic, or some similar protective material. The stencil is then applied to a surface and the ink or paint is rolled or dabbed onto the surface. The result is a design in the shape of the cut out area. This is the technique that we will explore next.

For this activity, you will need a spray bottle (the pump type used to spray hair spray or gel is adequate), a colored T-shirt, some straight pins and several sheets of 12 x 18 construction paper. We will be spraying bleach on the shirt, so it is a good idea to also have a smock or apron, and to cover your working area with newspapers several layers thick. The bleach will act as a color remover to gradually lighten the surface of the shirt, in reverse of laying down layers of opaque paint. The result is like painting with white, or working in a monochromatic color scheme, as different layers become gradually lighter with additional sprayings of bleach.

There are some additional factors that one needs to consider when designing for a piece of clothing. The design should not only be well composed and attractive to the eye, it needs to read well on the shirt. If the design is too large and becomes tucked into the pants, it will not be seen. Likewise if the design is to big it will fall into the folds of the clothing and be obscured. If the design is placed too high or too low, it will be distracting and difficult to view. Traditionally, designs for shirts are printed just above the middle, with designs on the front being printed higher than those on the back. You may want the design to wrap around the side or over the shoulder and deliberately become obscured. However, if this option is chosen, one should make it apparent the design is off-center, by moving it a substantial amount.

Since the shape of the shirt is instrumental in creating the negative space around the design, the sketches should be done in a shirt-shaped space, and attention paid to how the outside areas of the design fall in relation to the edges of the shirt. Note the examples on the next page.
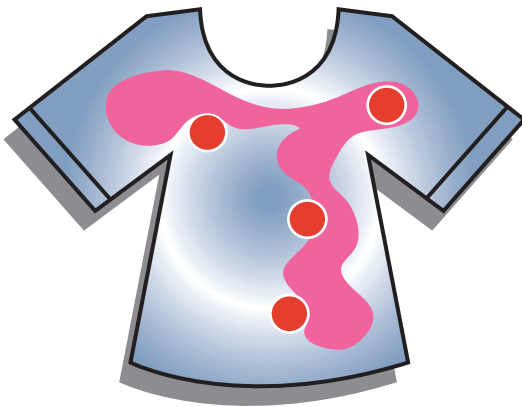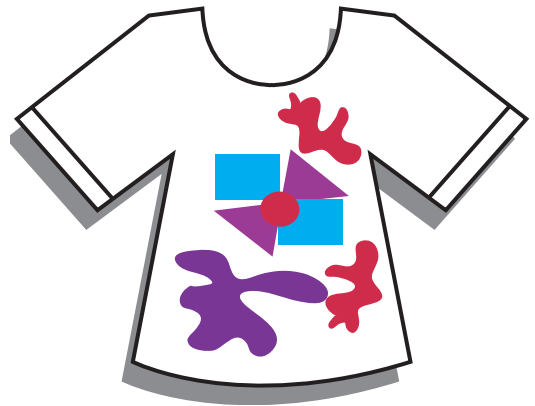
EXAMPLE OF T-SHIRT

MAKE SURE THE DESIGN IS NOT OBSCURED WHEN THE SHIRT IS TUCKED IN.

For this design, plan on making a visual statement about one of the senses. We all have five senses that enable us to perceive and appreciate the world around us. As artists, we have an additional gift: the ability to attend to these senses in a more profound way. Chose one of the five, and use your design to celebrate this sense, **BUT**…without actually showing that particular sense in an obvious way. Avoid the easy cliché. If you choose sight, refrain from using the eye, glasses or any other motif commonly associated with sight; for touch; avoid using hands or fingers. Try to think of other ways to show these senses, clearly, but in a new way.

EXAMPLE OF T-SHIRT


EXAMPLE OF T-SHIRT

EXAMPLE OF T-SHIRT

There is plenty of room for your sketches on the following page.

Sketches

Once you have reached a design solution that you are happy with, it is time to transfer it to the construction paper. This paper is what will be cut out and used for the stencil. When you begin to draw this on the paper, you will want to consider overlapping areas (if you have any).

TRANSFER YOUR SHAPES TO THE CONSTRUCTION PAPER.
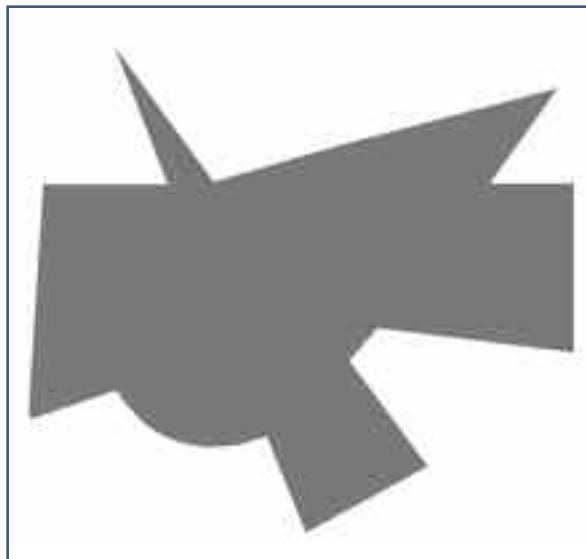
THE SHAPES SHOULD BLEND INTO ONE DESIGN UNIT.

Overlapping areas are of concern because they will result in a garbled design image area if not approached properly. Look at the design in illustration #21 above. When this design is cut out of the paper and the pieces removed, the separate shapes will blend into one design unit, losing their form
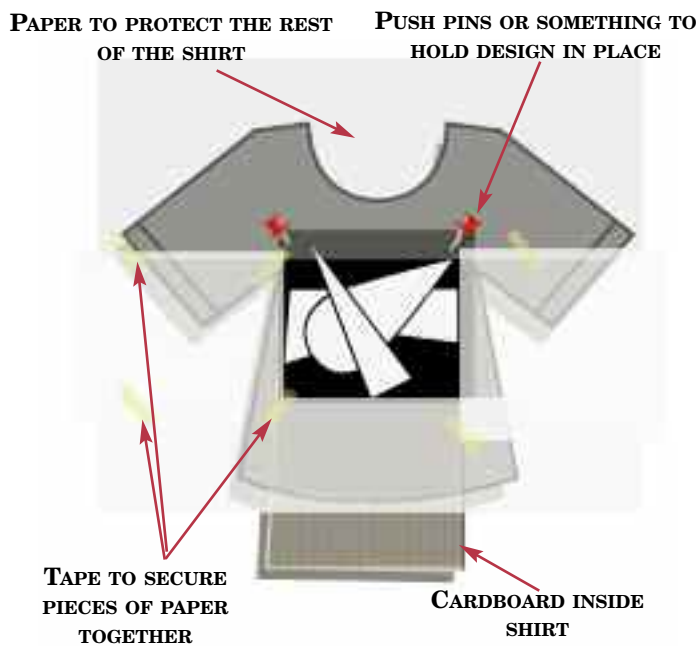

CUT EACH STENCIL OUT INDIVIDUALLY.

and depth, as in illustration #22. To avoid this, the easiest solution is to cut each shape from a separate stencil, and to bleach each area successively. In this way, the overlapping areas will become progressively lighter, and the form will hold together. The down side of this option is that the fabric will only bleach so much, and this will limit the number of layers you can add to your design. The alternative is to cut the stencil to leave a bit of negative space in the form of a ribbon of paper between the individual shapes in your design. See the example to the right.

Once the stencil(s) are cut, production can begin. The process is fairly simple. To begin, place a sheet of cardboard, preferably corrugated, inside the shirt. This serves two purposes. First, it will keep the bleach from soaking through the fabric and bleaching the back of the shirt. Second, it gives you a sturdy surface for placing pins in the fabric to hold your stencil steady. While it may be better to weigh down the edges with pennies or similar types of objects, sometimes in small spaces pins are your only option. When the cardboard is in place, lay the stencil over the shirt. Make sure to cover any excess

fabric that shows with more paper (newspaper will work fine).

When the bleach is sprayed, it must be sprayed directly from above if possible, to keep it from spraying under the edges of the stencil. Lightly dust the surface with bleach, and wait 5-10 minutes before moving on. The main reason to wait is that the bleach will take some time to lighten the fabric.

If you become impatient, and spray too much bleach at once, you will over bleach the shirt, and will not be able to lighten it further. In addition, spraying too much bleach at once runs the risk of curling the edges of your stencil, causing drips or runs that will dribble onto the fabric, or bleach to run down the pin and create a large white dot in a portion of your design.

PAPER TO PROTECT THE REST OF THE SHIRT

PUSH PINS OR SOMETHING TO HOLD DESIGN IN PLACE

TAPE TO SECURE PIECES OF PAPER TOGETHER

CARDBOARD INSIDE SHIRT

THE FINISHED PRODUCT.

When you are finished spraying your design, allow the shirt to dry overnight before removing it from the cardboard. The shirt should be laundered before wearing.