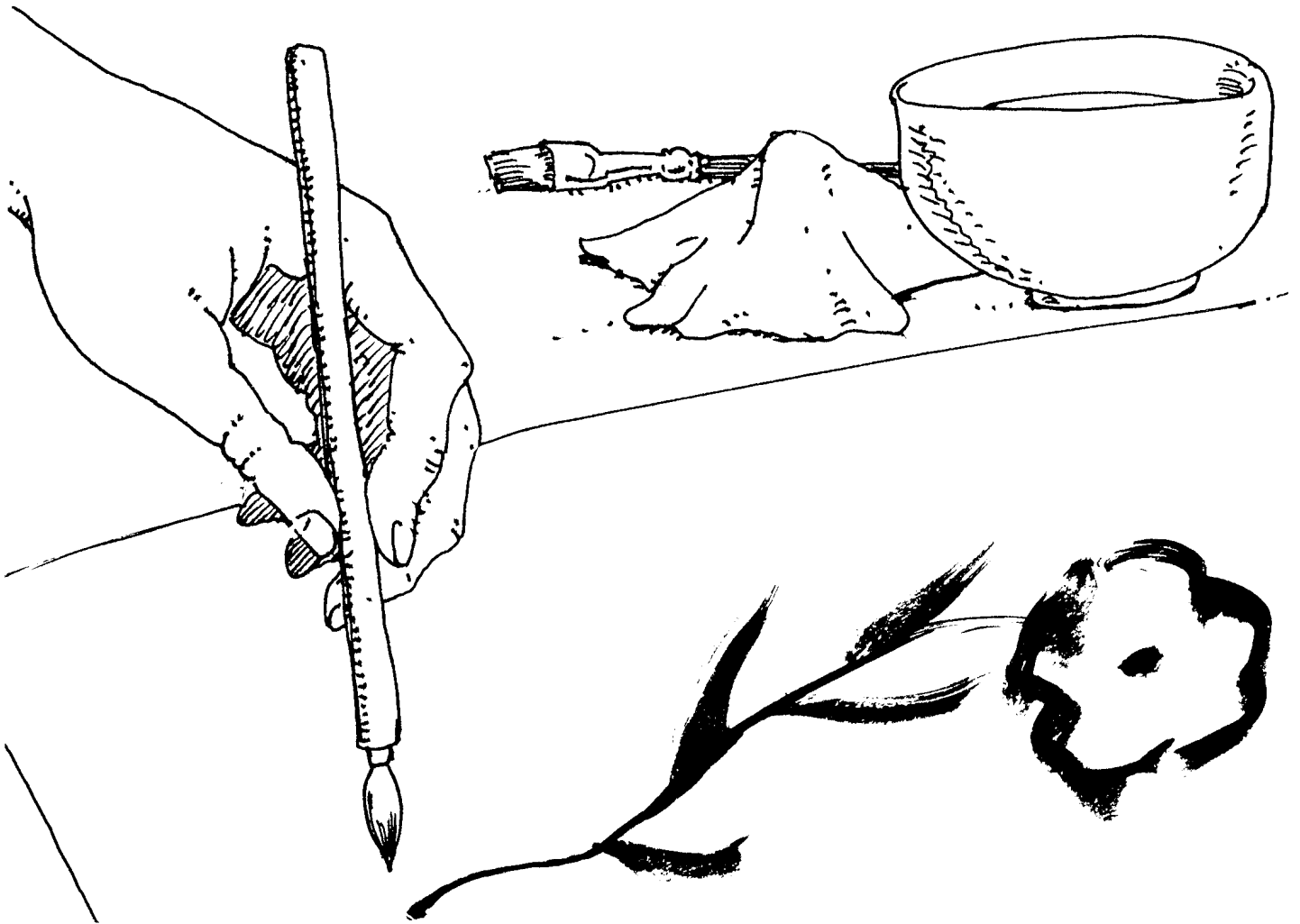


# Color: Expressive Arts

4-H MEMBER MANUAL • EM4771E





# C O L

♥ *This manual may be used as a resource for the Expressive Arts projects. It can help you:*

- ... think of new ways to do things,*
- ... understand basic art principles,*
- ... understand cultural values,*
- ... develop a career in art and crafts,*
- ... develop a lifetime hobby,*
- ... enjoy beauty in your surroundings,*
- ... develop your own ideas without the help of anyone else, and*
- ... recognize quality in art and crafts.*

Suppose the whole world was like a black and white photograph—no colors, just shades of gray. How would your life be different? Do you think gray tomatoes and gray chocolate would taste the same? Would a driver get a traffic ticket for going through a gray light?

There's no color without light. And just a little light isn't enough to show colors. When you wake up in a dark room at night, even if there's enough light for you to see the window, the door, the furniture, and so on, you can't see what color anything is. When you turn the light on, all the colors seem to turn on, too. This is because color is reflected light. Different pigments reflect different parts of the light, which human eyes see as different colors.

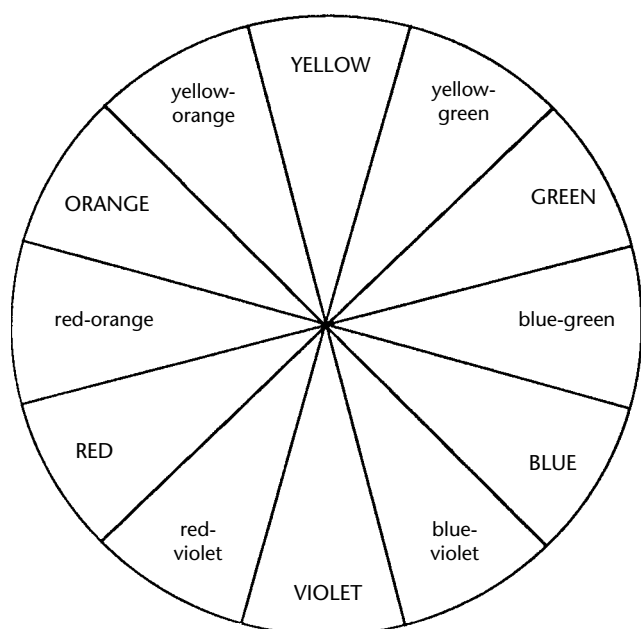
There are hundreds of names for hundreds of colors—like carmine, salmon, mauve, ecru, cobalt, taupe, viridian, ocher, cyan, etc. Sometimes it's hard to tell exactly what they mean. To make “color language” easier to understand, people have worked out ways of describing colors in terms of just three qualities: hue, value, and intensity.

We can group color into “families,” such as the reds, the purples, or the greens. The name of a color family is its *hue*. For example, navy blue, sky blue, and powder blue all belong to the blue family. Sometimes colors in the same hue family have very different names; maroon and pink are both red in hue.



The value of a color doesn't mean how high its price is. In color terms, *value* means lightness or darkness. A dark red, such as maroon, has a low value. Pink is red with a higher value.

*Intensity* means the brightness or dullness of a color—how “strong” the color is. Brightness is not the same as lightness, even though they sometimes go together. A pale yellow with a very high value (lightness) may not have as much intensity (brightness) as a darker yellow. High-intensity colors are good for posters and signs where you want to catch people's attention. Where would you rather see low-intensity colors?



## Mixing Colors

How do colors work together? Look at the scene in front of you. Don't move your eyes. How many different colors do you see? We almost never see just one color at a time. Even if you're looking at a blank wall, there are probably different shades and tints of color on it. The way a color looks depends partly on the other colors around it. The best way to find out how colors can change each other is to experiment with different combinations.

### *What you need:*

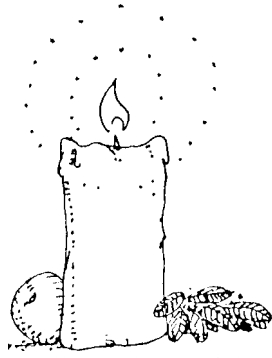
- tempera, watercolors, or other paints in many colors
- white and colored paper
- small containers for mixing paints (muffin tins, jar lids, etc.)
- brushes
- water

### *What you do:*

1. Look at the outline drawing of a *color wheel*. It shows some of the ways colors are related to each other. In the wheel, the hues that are most alike are next to each other. These closely related hues are called *analogous colors*. For example, blue, blue-green, and green are one set of analogous colors; red, red-orange, and orange are another set. “Analogous” comes from a Greek word that means “alike.” Use your paints to color in the hues on this color wheel, or make your own color wheel on a blank sheet of paper.

2. What do you think will happen if you mix yellow and blue paint in different proportions? Try it. Start with a small amount of yellow paint and begin adding blue, a little at a time. How does the color change? Compare the colors you get with what you see on the color wheel. Now start with blue paint and add yellow. Do you get the same results?
  3. Artists have found that if they start with three colors at equal distances on the color wheel, they can make all the other colors on the wheel. The easiest way is to start with red, blue, and yellow, which are called the *primary colors*. (“Primary” means “first.”) If you mix equal amounts of two primary colors, you get a *secondary color*—the color that lies between them on the color wheel. When you mix red and blue, what secondary color do you get? What happens when you mix red and yellow? What do you get when you mix two secondary colors?
  4. Colors can have an effect on each other even without mixing. Experiment with painting stripes of colors side by side. Does red between two yellow stripes look the same as red between two blue stripes? Try different combinations. Do you like some better than others? What colors would you use to paint a picture of a burning house?... a storm at sea?... a carnival?... a harvest scene?... a forest in spring?... a city in winter? If you could use any colors you wanted, what colors would you use to redecorate your room?
  5. The colors opposite each other on the color wheel, such as blue and orange, are called *complementary colors*. (That’s not the same as “complimentary” with an “I,” which means “flattering” or “giving compliments.”) Complementary colors are the hues that are as different from each other as possible. What color is complementary to yellow?... to red?... to blue-green? You can use complementary colors to change the intensity of a hue. If you pick a color, such as orange, and mix in a little of its complementary color (blue), the orange will still be orange, but not as bright; adding the complementary color reduces its intensity. Try this with some other pairs of complements. Colors that have been “toned down” by adding a little of a complementary color are called tones.
  6. Black, white, and gray are called *neutrals*. In a way, they’re not even colors—they have no hue of their own, which is why they don’t appear on the color wheel. But they’re very important for color mixing. You can’t change a color’s hue by mixing it with a neutral, but you can change its value (lightness or darkness). Take some red paint and try adding white, little by little. The colors you get by adding white to any hue are called *tints*. What happens when you add black to your red? Colors darkened by adding black are called *shades*.
  7. Gray itself is a mixture. Pure grays are mixtures of white and black. Do you think a gray made with equal parts of black and white will be twice as dark as a gray made with half as much black? Try it! There’s another way of making gray, too. Since complementary colors are exactly opposite in hue, they tend to cancel each other out and leave gray. Try mixing different pairs of complementary colors. Are the grays you get all the same? Are they the same as the grays you got by mixing black and white? A color whose intensity has been reduced by adding gray or its complementary color is called a *tone*.
  8. Try painting a picture in different tints, shades, and tones of the same hue. It can be a picture of something, or an abstract design that doesn’t try to look like any objects. For example, you might use all greens to paint a scene of fields and woods... or all reds for an abstract painting. This kind of color combination, with the colors all belonging to the same hue family, is monochromatic. (“Monochromatic” comes from the Greek words meaning “single color.”)
- There are other ways of talking about colors. Do you think colors have temperatures? Colors like red, yellow, and orange are often called *warm* colors. Can you think of any reasons why people might call them that? Blue and green are often called *cool* colors.

## Making Candles

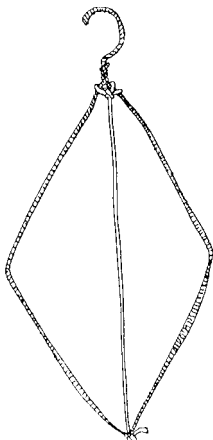


You can make your own wax candles in beautiful colors, interesting color combinations, and almost any three-dimensional form you can think of. If you have any old candles around the house that have burned down to a little stub, don't throw them away! You can melt them down with other wax to make new candles. Especially look for ends and scraps of colored candles. Even a few pieces of old candles can color the wax for several brand new candles.

Another way to color candles is by adding wax crayons to the candle wax. If you plan to make very many candles, you can buy special wax dyes. Ordinary dyes, paints, and inks don't work because they won't combine with the wax.

A candle is something like an oil lamp that burns itself for fuel. Once a candle is lit, the heat from the candleflame melts a little of the wax the candle is made of. The melted wax soaks into the *wick*, rises up the wick to the flame, and burns there. For a candle to burn well, the wick needs to be the right size for the amount of wax. If the wick is too small, it can't soak up melted wax fast enough. If the wick is too large, it may melt the wax too fast. Either way, the candle may drip, or the wick may fall over into the melted wax and put itself out.

*Tricks of the Trade...* If you don't have candlewicking, you can make your own wicks. Braid three



pieces of string tightly together. Soak your braided string in a solution of 1 cup water, 2 tablespoons borax, and 1 tablespoon salt for at least six hours. Let the string dry thoroughly, and it will be ready to use as a wick.

### *What you need:*

- 32-ounce tall fruit juice can
- cooking oil
- large pan
- discarded candle ends
- 2 pounds of wax (*paraffin, beeswax, or a mixture*)
- wax crayons
- 2–3 feet of candlewicking
- wire coat hanger
- scissors

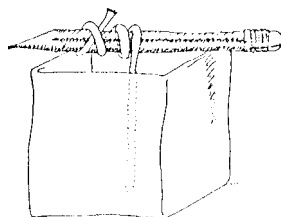
### *What you do*

1. Wash and dry your can. Then cover the inside of the can with a thin coat of cooking oil.
2. If you have different-colored pieces of old candles to recycle, sort them by color. Melting too many colors together will give you a muddy brown.
3. Break your wax into pieces and put them into the can. Set the can of wax in a pan of boiling water over a burner. This acts as a double boiler. **NEVER PUT A CAN OF WAX DIRECTLY OVER HEAT. ALWAYS HAVE IT IN A PAN OF WATER. OVERHEATED WAX IS VERY DANGEROUS AND CAN EASILY CATCH FIRE.**
4. As the wax melts, you can add old candle ends to color it. If you want more color, peel the paper off a wax crayon and add the crayon to your wax mixture. It will melt with the wax. Your finished candles will be darker than the melted wax.
5. Bend your coat hanger into an oval shape. Be sure it's narrow enough to fit into your can of wax.
6. Tie both ends of a piece of candle-wicking to your coat hanger, stretching it across the oval the long way. Make it as tight as you can so your candle will be straight.

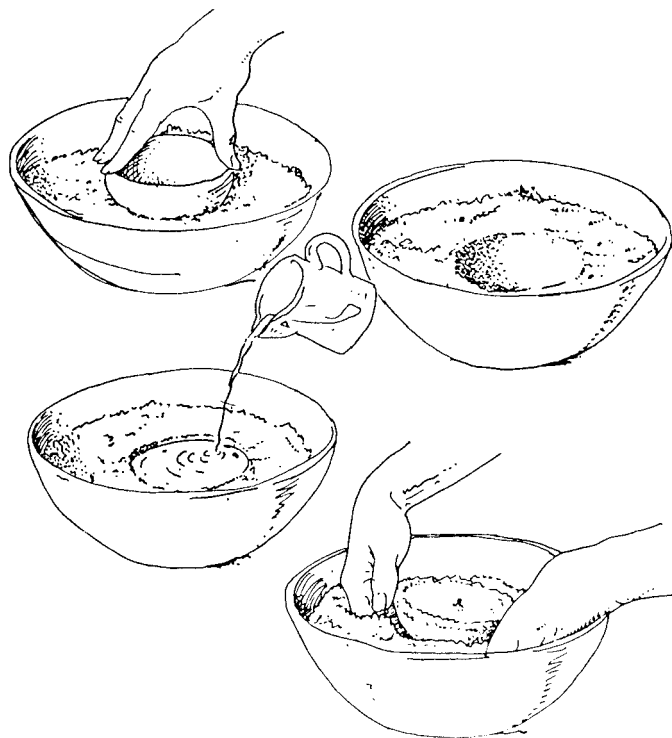
7. When your wax is melted, it should come to about 1½ inches below the rim of your can. If you need to add more, put the pieces in carefully so it doesn't splatter. Let the added pieces melt before you do anything else.
8. As soon as all the wax has melted, carefully take your can out of the pan of water and turn off the heat. Use heavy mitts or potholders to lift the can of hot wax and set it in a sink or on a thick layer of newspapers. Hot wax can give you severe burns. Hot wax can start fires. Let your wax cool for 15 to 20 minutes.
9. Dip your coathanger and wick into the wax up to about one inch from the top end of the wick. Lift it slowly out of the wax and hang it up to let the wax harden for two or three minutes.
10. As soon as the wax on the wick is solid, dip it again. Let the wax harden after each dip. This will happen faster and faster as the melted wax in the can cools. Soon you can just dip the wick, hold it over the can for a few seconds, and dip it again. Do this over and over until your candle is as thick as you want it.
11. Hang up your frame for 1 to 2 hours, until the wax has hardened completely. Then use scissors or a knife to cut the wick loose from the coathanger, and remove your candle. Trim the bottom end of the candle with a sharp knife to make it flat.

Use the rest of your wax to make other candles. Experiment! You can sand-cast candles, using the techniques explained in the unit on "Form" (EM4770). Sand will stick to the wax, making a crusty texture. Or you can make a mold out of aluminum foil—be sure it has no leaks before you pour melted wax into it! Or use a mug, a cardboard frozen juice container, a milk carton, a piece of metal pipe sealed at the bottom...

Except for sand-casting, you'll need to coat the inside of your mold with vegetable oil. Before you pour in the wax, insert the wick in your mold. You can thread the wick



through a small hole in the bottom of the mold. Tie a knot to keep the wick from pulling all the way through. Tie the other end to a pencil or stick and lay it across the top of the mold to hold the wick upright. Or, instead of making a hole, tie the end of your wick to a metal nut or washer and drop it into the mold. If your candle won't come out of the mold, dip it in hot water, or put it in the freezer for three or four minutes. Use cookie cutters or muffin tins to make small flat candles you can float in a bowl of water. Or glue short pieces of wick to the bottoms of walnut shells and fill them with wax for tiny "boat" candles.



Experiment with colors. Pour a little melted wax into a mold, let it cool just until a skin forms on top, and then add a different color of wax. Or use a small brush to paint a design on the outside of a candle with different colors of melted wax. Or fill a mold almost full of uncolored paraffin, let it cool a little, and stir in some small pieces of colored wax. What happens if you make dipped candles by dipping first in one color and then another? You could decorate a candle by rolling it in colored sand or crushed eggshells while it's still warm.



## Crayon Batik

*Batik* is an ancient *resist dyeing* process. Using hot liquid wax, the artist draws lines and shapes on fabric. When the fabric is dyed, the wax resists the dye and the areas covered with wax receive no color. Then the artist removes the wax.

The word “batik” is a Javanese word meaning wax painting, and batik from Java is especially famous. The process may have been first invented by the ancient Egyptians, or perhaps in India. It has also been found in South America, Japan, and China. Liquid starch resists were used before hot wax. You can also create beautiful batik by using colored crayons. The process is a little different from traditional batik, but the result is very similar.

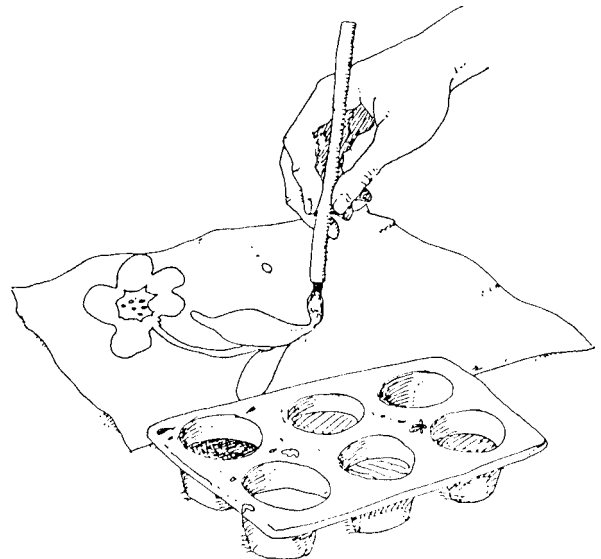
### What you need:

- white or solid-color cotton fabric (handkerchiefs or pieces of old bed sheets are good)
- heavy cardboard larger than the batik you plan to make
- sheet of plastic large enough to cover cardboard
- masking tape
- straight pins
- wax crayons (peeled, broken into small pieces)
- 1/2 pound paraffin
- muffin tin
- watercolor brushes (inexpensive kind)
- pencil and paper
- India ink, black tempera, or dark liquid dye
- ironing board and iron
- newspapers
- flat cake pan big enough to hold muffin tin

### What you do:

1. Wash and iron the fabric you plan to batik. This will remove any sizing, starch, or finish added by the manufacturer. Cut your fabric to the size and shape you want.
2. Plan your design. You may want to draw it on paper before you put it on your fabric. Decide what colors you want to use.

3. Tape the sheet of plastic to your heavy cardboard. Use straight pins to fasten your piece of fabric securely to the plastic-covered cardboard.
4. With a soft lead pencil, lightly sketch your design on the fabric. Don't press too hard. You've got to have very light lines, or your sketch will show in your completed batik. Leave about 1/8-inch space between parts that will be two different colors. This will keep your colors from running together.
5. Put the broken crayon pieces in your muffin tin, one color to a cup. Add about one square inch of a 1/4-pound block of paraffin to each color.
6. Put your muffin tin in the flat cake pan. Fill the bottom of the cake pan with about 1 inch of boiling water, over low heat. (NEVER PUT MUFFIN PAN OVER DIRECT HEAT).
7. When the crayon-paraffin mixture has completely melted to the consistency of poster paint., use a brush to paint your design on your fabric. Paint your picture or design with bold, heavy strokes, making sure to leave plenty of wax behind. Work quickly with one color at a time. If you have only one brush, wash it in water and detergent before you use it in another color. If your wax mixture hardens too much to work with, reheat the water to melt it again.





8. Cover as much of your fabric as you want with painting wax. The colors of your finished batik will come from the crayons. Any uncovered spaces will be dark.
9. When you've finished painting your design, remove the pins. Let the wax cool and harden. Then crumple your fabric and shake off any loose wax particles. Do this over newspaper or a waste basket to catch the crumbs of wax.
- 10a. If you want to use dye for your batik, follow the directions on the package and prepare a strong dye solution. Dip your fabric into the dye and leave it in the solution until the fabric looks about a shade darker than you want. Take your fabric out and rinse it under cool tap water until the water runs clear.
- 10b. If you want to use ink or tempera instead of dye, pin your fabric onto the plastic-covered cardboard again. With a large soft brush, cover the entire surface of your fabric with India ink or tempera. Force the ink or paint down into the cracks and open spaces. Use a paper towel to wipe off any extra liquid. Then rinse your fabric under cool tap water until the water runs clear.
11. Let your fabric drip dry.
12. Spread several layers of newspaper on your ironing board. Lay your dry batik on top and cover it with several more newspapers. Press slowly with a hot iron (don't use steam) to remove the wax. Keep changing your paper until no more wax can be pressed from the fabric. (You may find interesting prints on the paper, too.)
13. When cool, your batik will be stiff. You may want to frame it or attach it to a rod for hanging. Or, you could use it for a pillow cover, stitch it to a shirt or jacket, use it for a headband, etc. When you want to clean your crayon batik, wash it by hand in mild detergent and warm water. Iron between sheets of paper as you did before.

## Tie-Dye

Like batik, *tie-dyeing* is a resist dyeing process. Instead of being coated with wax, certain parts of the fabric are folded, tied, or sewn to protect them from the dye. The art of tie-dyeing has been found in Africa, India, Japan, China, Indonesia, Peru, and many other parts of the world.

There are no rules in tie-dyeing. You can tie knots in your fabric, fold over parts and stitch them down, fasten it with rubber bands or string, pleat it, wad it, or whatever you can think of that will "hide" part of the fabric so the dye can't get to it. You may be surprised—your first results may not look like what you expected at all. After tie-dyeing a few different items, or watching other people tie-dye, you can predict more exactly what results you'll get from different ways of preparing your fabric. There's hardly any limit to what you can tie-dye: T-shirts, jeans, bags, hats, pillow covers, covers, sheets, scarves, wall hangings.... Or you can tie-dye fabric by the yard and then use it to make clothes, notebook covers, picture frames, tablecloths....

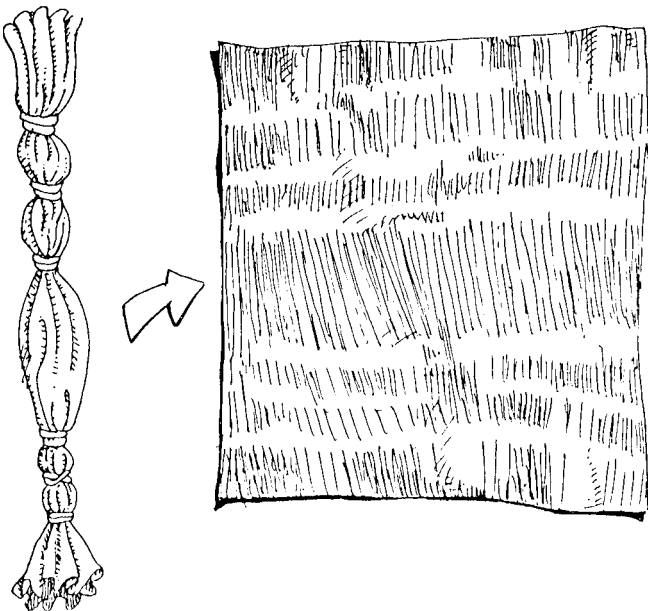
Just remember that not all washable fabrics are good for tie-dye. Polyesters and acrylics don't take dye well. Cotton, acetate, rayon, linen, silk, nylon, or machine-washable wool will give beautiful results. Thin fabrics are easier to tie.

### *What you need:*

- fabric or clothes to tie-dye
- dyes (one or more colors)
- heavy thread, string, rubber bands, or needle and thread
- kettle or large pan for dyeing
- wooden spoon or stick for stirring
- rubber gloves
- iron

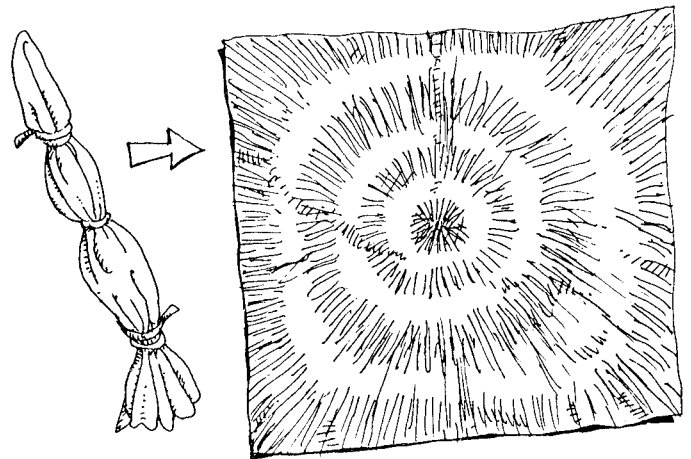
*What you do:*

1. Wash and dry your fabric to remove any sizing in it. Iron out any wrinkles.
2. Plan your design. Even experienced tie-dyers get surprises, but you can at least plan the general shape and pattern of your design and the colors you want to use. Remember that all the fabric you can see will be colored by the dye—and the dye will even penetrate partway into your knots, folds, etc. Only the tightly covered inside parts will be completely protected from the dye. These drawings show what kind of results you can expect from a few different ways of preparing your fabric.
3. Prepare your fabric. If you fold it in narrow pleats, you may want to iron them in place for easier handling. You can twist, fold, tie, roll, or crumple your fabric. Fasten it with rubber bands, string, or stitching.
4. Prepare your dye. Follow the instructions on the package. (It's a good idea to wear rubber gloves when working with dyes.) Put your fabric into the hot dye and simmer for the recommended length of time. This is usually between 20 and 45 minutes. Stir occasionally with a wooden spoon or stick.



5. Remove fabric from dye. Do not untie your fabric. Rinse in cold water until the water is clear. Use cleanser to clean any dye stains from sink.
6. Untie the knots, remove the rubber bands, or take out the stitches you put in. Smooth out your fabric. Is the design what you expected? Let your tie-dyed item dry.
7. If you want more colors in your design, repeat steps 2–6 with a different color of dye. Remember what you've already found out about mixing colors. For example, suppose your fabric is white, your first dye is blue, and your second dye is yellow. You can end up with some parts still white, some parts blue, and some parts yellow, but most of your fabric (the parts exposed to both dyes) will probably be green.

Experiment with different colors and different ways of tying fabric. What happens if you start with a colored fabric?... or a printed fabric? Instead of tie-dyeing, you can tie-bleach. Start with bright or dark-colored fabric, tie it just as you did for tie-dye, and soak it in a solution of about one part liquid bleach to three parts water. When the color has bleached as much as you want, take out the fabric (be sure to use rubber gloves) and rinse it thoroughly before you untie it. Or sprinkle dark-colored fabric with undiluted bleach and then rinse it.



## Stained Glass Patchwork

*Patchwork* may have started with sewing patches on torn clothes, but it soon became a way of expressing ideas, and a way of making useful things beautiful. In this country, patchwork quilts have a long history. Slaves, factory workers, farm women, and wealthy ladies all made quilts that told about their lives and dreams. At the same time, they developed traditional patterns that were handed down from one generation to the next and passed from one part of the country to another. Each pattern had its own name. Sometimes the same pattern was known by several different names in different places.

One of these patterns has been called Stained Glass, Mayflower, Cathedral, and Stamp. Can you guess what it looks like? One reason it was called Stamp was that it can be made with patches so small they look like postage stamps. With different colors of patches, you can get an effect like stained glass, especially if you hang it up against the light.

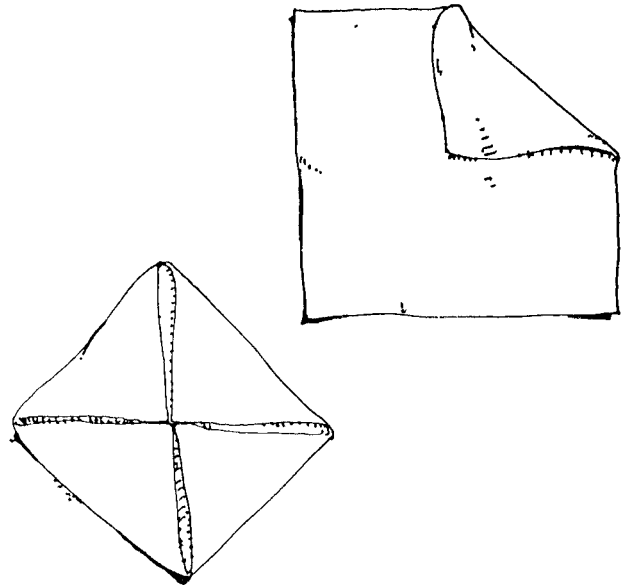
This pattern uses the two basic techniques of patchwork: *piecing* and *appliqué*. In pieced work, the pieces are sewed to each other at the edges. In *appliqué*, patches are laid on a fabric background and stitched down. To make a colorful Stained Glass pillow, you fold and refold four separate squares of fabric, piece them together to make the background, and then *appliqué* patches to complete the design.

### *What you need:*

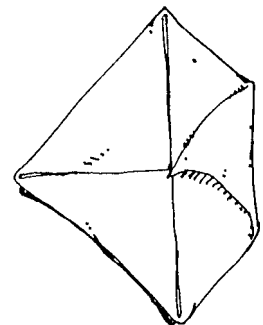
- solid color fabric for background (soft cotton is good)
- fabric scraps for patches
- straight pins
- needle
- sewing thread in color to match background
- scissors
- iron

### *What you do:*

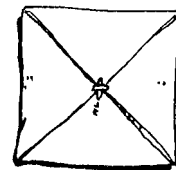
1. Cut four squares of background fabric. Each square should be the size you want your completed pillow to be. Your squares can be all the same color, or different colors.
2. Take a square and fold each corner into the center. This makes a square half as big as you started with. Press your folded square with a warm iron.



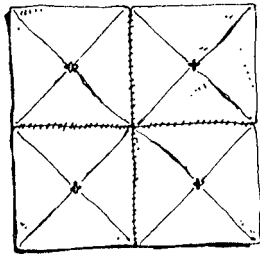
3. Take your folded square and fold each corner into the center again. Press the folded square again with a warm iron. How big is it now?



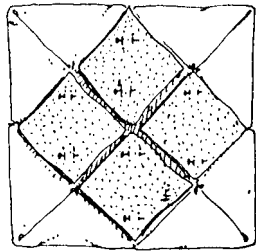
4. Stitch together the points that meet in the center of the square. This completes one background square.



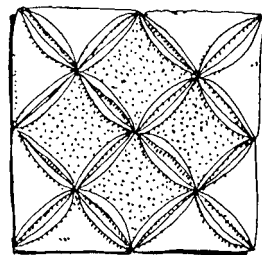
5. Fold, iron, and stitch your second, third, and fourth squares the same way you did the first one.
6. Using an overcast stitch, sew your four squares together to make one big square. (The stitching won't show in your finished pillow; it will be covered by patches.) This is your completed background. Notice the four diamond-shaped "windows" where each two squares are sewn together.



7. Now cut four square patches of scrap fabric. Each one should be a little smaller than the diamond-shaped "windows."
8. Lay these patches on the "windows" and pin them in place.



9. Roll the folded edges of the windows over the raw edges of the patches. Using small stitches, sew the rolled edges down. You may want to catch the fabric all of the way through to the back side, or only through part of the square.
10. For the back of your pillow, cut a piece of fabric the same size as your Stained Glass pillow top. With right sides of fabric together, stitch around three sides of your square and partway along the fourth side. If you want, you can sew a zipper into the opening. Trim seams. Turn to right side

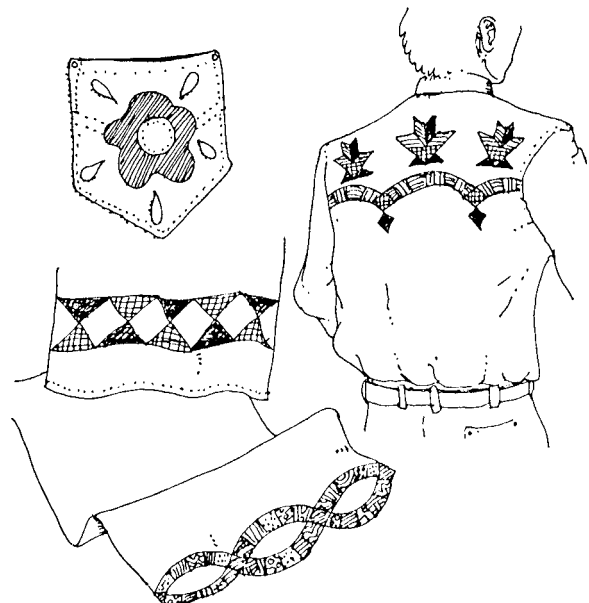


and press. Stuff with old nylon hose or fiberfill. Close your zipper or sew the opening shut.

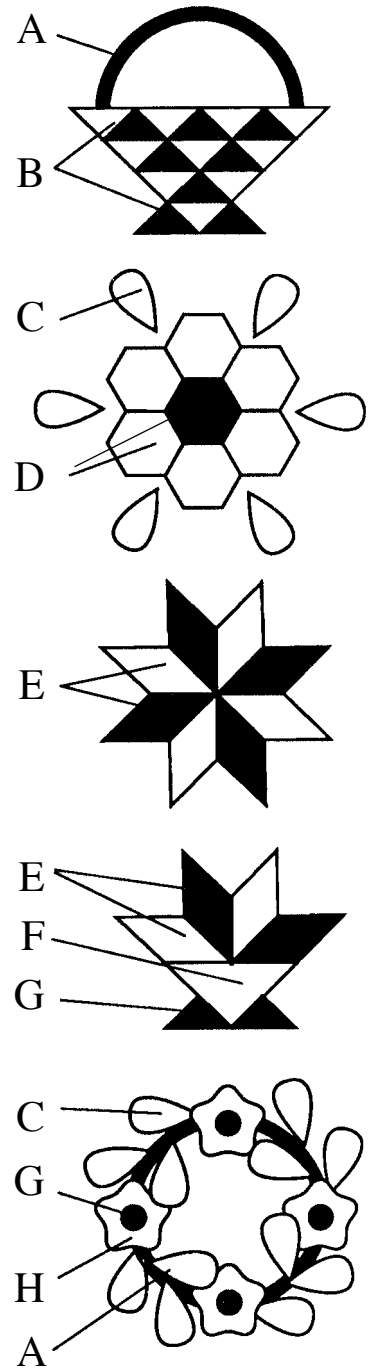
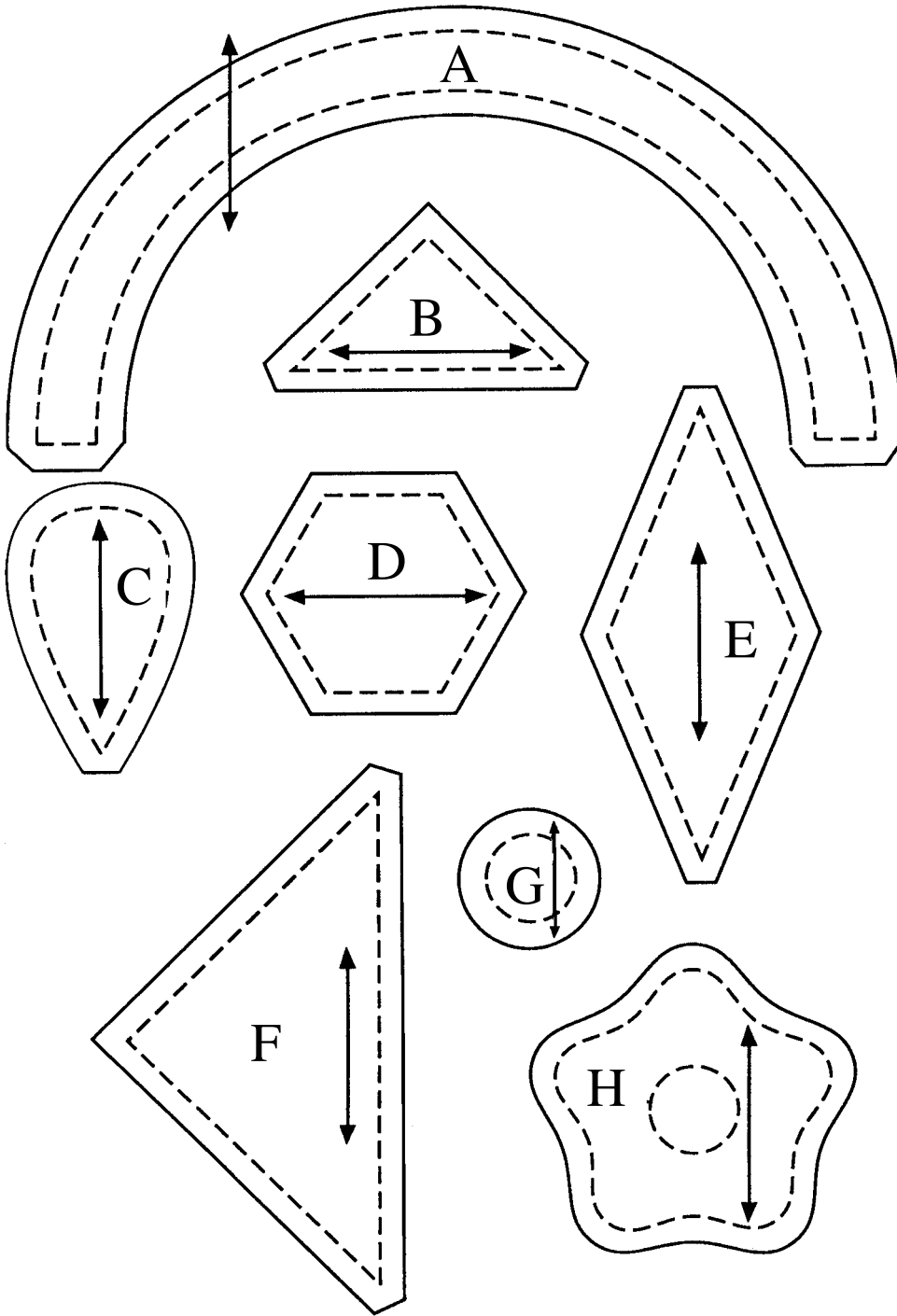
You could use this Strained Glass pattern to make a small quilt, apron, or chair cover. Try using solid color fabric patches with a print or plaid for your background. You might decorate the patches with stitchery. How would your pillow be different if the background and patches were all shades and tints of the same color?

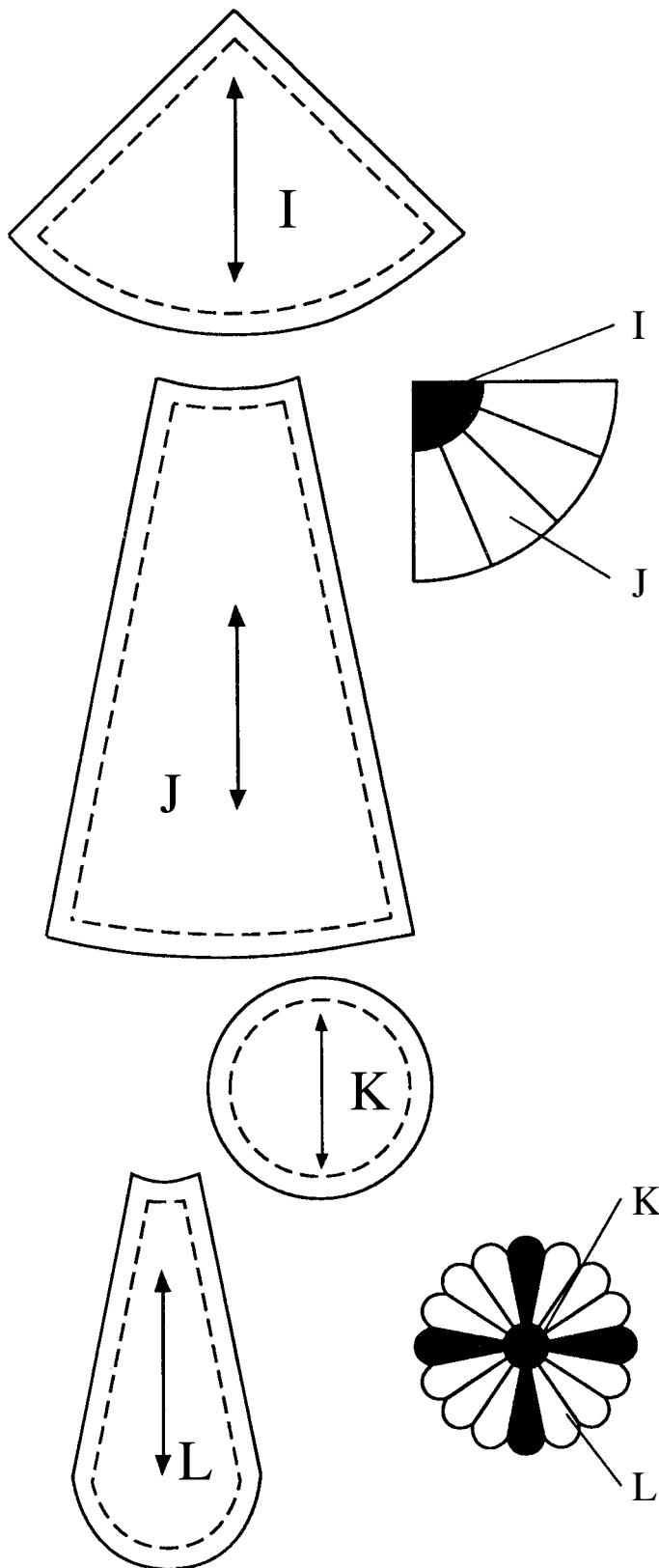
## Mini-Patchwork

Appliquéd patchwork makes great designs for shirts, backpacks, jeans, totebags, etc. You can use either pieces or appliqué patchwork, or a combination of both, to make lampshades (cover the seams with strips of dark fabric for a real stained glass effect), pillowcases, aprons, skirts, quilts, wall hangings, and so on. The drawings on the next pages show you how to make miniature versions of some other traditional quilt patterns. The pattern pieces are grouped together with small diagrams to show you how to sew them together. Then you can appliqué the whole patchwork onto a potholder, jacket, or whatever you want.



Arrows show grain lines (straight of fabric). Broken lines are seam lines.





## Painting Eggshells

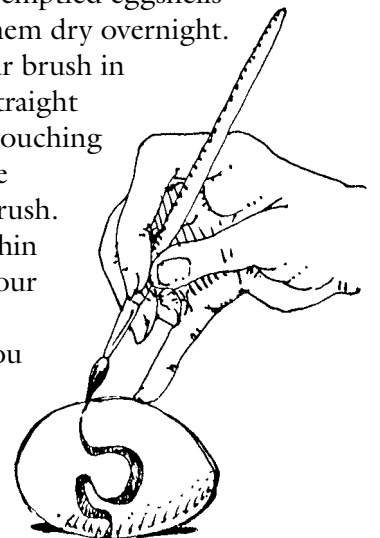
When you draw or paint on a flat surface, your design has edges—top, bottom, and sides. Even if your surface is a curved shape like a circle, there’s always an outside edge that tells you, “Stop here! No farther!” But, what happens when you paint on a three-dimensional form with continuous curving sides, like an egg?

### *What you need:*

- fresh eggs
- darning needle
- paints (watercolors, poster paints, tempera, or acrylics)
- brush

### *What you do:*

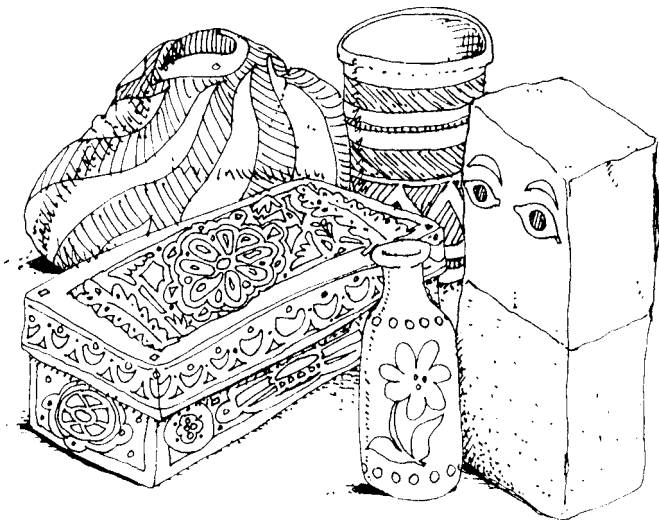
1. Use a large sharp darning needle to make a hole in the big end of each egg. Then put a small hole in the other end. Poke your needle in far enough to break the yolk inside the egg.
2. Shake each egg over a bowl or pan to get the eggwhite and yolk out of the shell. (They can be used for cooking.) You can clean out any remaining egg by blowing into the hole in the small end. Prepare as many eggshells as you want to paint. Rinse your emptied eggshells with water and let them dry overnight.
3. Practice holding your brush in a vertical position (straight up and down), just touching the eggshell’s surface with the tip of the brush. You can make very thin lines this way. Use your little finger to help steady your hand. You can make thicker and thinner lines by gently pressing down and lifting up as you move your brush tip over the surface.





4. Plan your design. What colors will you use? Do you want one side of your egg to be the front? Do you want your design to “flow” continuously around the egg... or do you prefer separate small designs? You may want to make sketches on paper before you start to paint... or even sketch your design very lightly in pencil on the eggshell.
5. Paint your egg. Start with only one color. This will help you give close attention to developing your skill with a brush. As you hold your brush to paint, rest your little finger on your eggshell. This will make it steady and easier to paint. When your first color has dried, add another, if you want to. While one eggshell is drying, you can be painting another. Try different designs and different combinations of color on each one.

Try painting other three-dimensional forms. Where can you find cubes... rectangular prisms... cylinders... cones... pyramids... irregular forms? For a smooth background, you may want to give your object an all-over coat of white or colored paint before you begin your design. Paint bricks or rocks to use for doorstops. For paperweights, you might use small stones or small boxes filled with sand. Large cardboard, wooden, or plastic boxes or crates can make colorful storage trunks. For painting metal, enamel paints usually give the best results.



## Watercolor Painting

*Watercolor* painting is one of the popular art techniques. Children do it for fun. Professional artists do it to create beautiful and valuable pictures. Many thousands of people do it as a hobby.

You can buy inexpensive watercolor sets that include four, eight, or sixteen colors and usually one or two brushes. Don't worry about not having enough different colors—you can make more by mixing the colors you have. You can also buy watercolors in tubes, but these are more expensive.

### *What you need:*

- watercolors
- watercolor brushes
- container for water
- small containers for mixing water colors
- cotton rag or paper towels
- watercolor paper or drawing paper
- scratch paper for sketching
- hard pencil
- drawing board (any smooth board big enough for your paper)
- masking tape

### *What you do:*

1. Fasten a sheet of paper to your drawing board with masking tape along all the edges. Your drawing board can be stiff cardboard, fiberboard, etc. If you don't have a board, tape your paper to your table or other work surface. This is to keep your paper from curling and warping when it gets wet. If you don't have regular watercolor paper or drawing paper, you can use almost any non-shiny white or pale-colored paper. Typing paper is usually too slick.
2. Wet your colors. Put several drops of clear water on each color in your box. Stir each color gently with a clean brush. Always clean your brush in the container of water before you touch it to another color. Change the water often to keep it fresh.

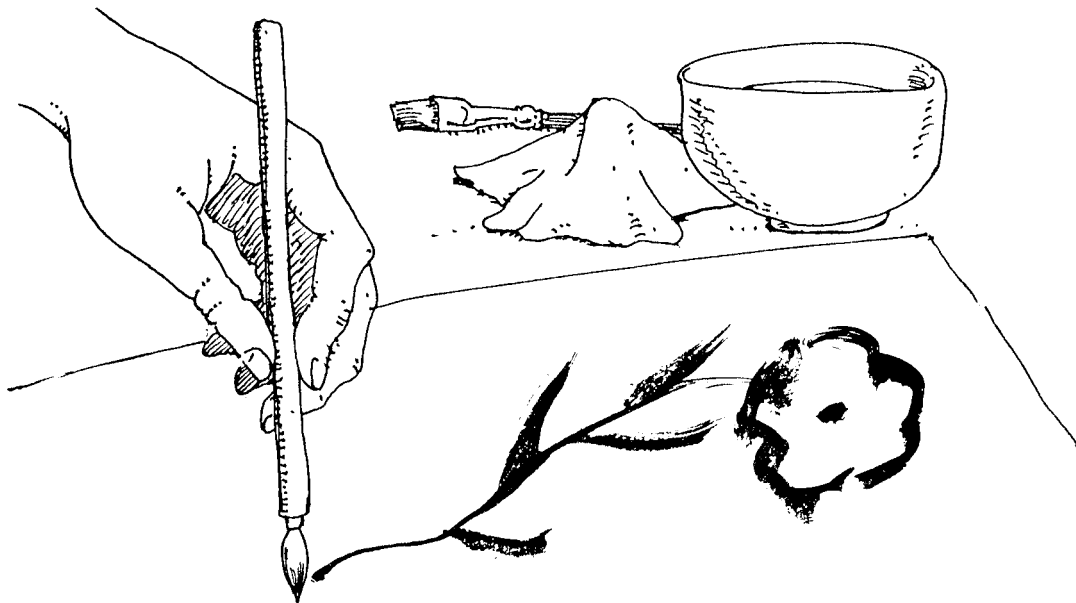


3. Experiment with your colors and brushes. Try painting different kinds of lines—thick and thin, straight, angled, and curved. You can make very thin lines if you hold your brush in a vertical position with its tip just touching your paper. What happens to your line if you gently press down as you pull the brush across the paper? Always pull the brush—don't scrub it back and forth. Wet your brush often and keep it smooth and pointed.
4. If you have two or more brushes, try them all out. How are they different? Try making dots, squiggles, and shapes. What happens when you add more water to a color? What happens if you paint one color over another on your paper? Use muffin tins or jar lids to mix lighter tints by adding more water to a brushful of color. Can you paint two colors side by side on your paper without mixing them? What happens if you wet a blank area of your paper with clear water and then paint on it while it's wet? Use as many sheets of paper as you want.
5. Start again with a clean, dry sheet of paper taped to your board. Plan a design for a picture. Decide where you want to put a center of interest, how you want to balance shapes and colors, where the main lines will be, and so on. You may want to try out different designs by sketch-

ing them on scratch paper. When you've decided on your plan, you can sketch it very lightly with a hard pencil on your watercolor paper. Artists often sketch their designs before painting with watercolors.

6. Now paint your picture. There are no wrong ways to paint. Do it the way that seems right to you. You may want to do your whole painting in one sitting... or you may want to paint the background first and let it dry for several hours before you put in the shapes. You may want to use nothing but watercolors... or add details with other media, such as colored pencils, ink, or fine-tipped markers. While one picture dries, you can be painting another one. How does a watercolor painting change as it dries?

*Tricks of the Trade...* If you plan to have a large background area in your picture (such as sky, water, or grass), mix plenty of the color for that area before you begin to paint. Then dip your largest brush in clear water and wet the whole background area, first going carefully around the edges of the area. Then paint the wet area with the color you mixed. It will spread to the edge of the wet part and stop when it comes to dry paper. Let it dry. Now you can paint in the rest of your picture, with clean edges between the different colors.



## Colored Fire

Do you and your family or friends enjoy campfires or fireplaces? You can make “fireworks kindling” and “sparkling joy logs” out of dry pine cones, wood chips, corncobs, and old newspapers. When you add them to a fire, they will burn with beautifully colored flames. Summer is the best time to make them, because the materials need plenty of time to dry. Unless completely dry, they won’t produce colored flames.

### *What you need:*

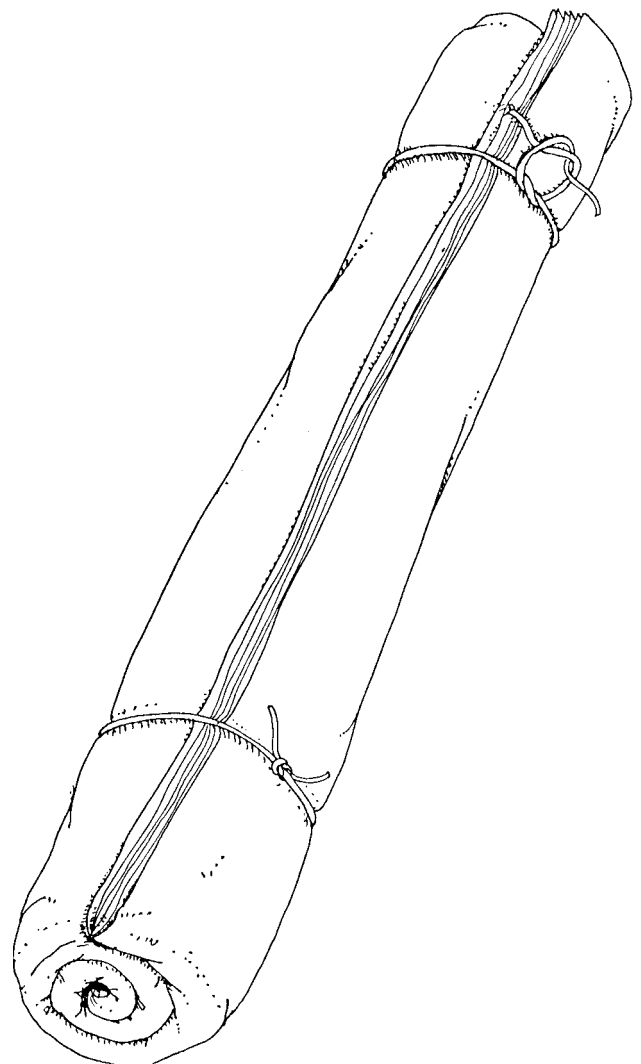
- pine cones, soft wood chips, corncobs, newspapers
- salt
- water
- large earthenware, glass, enameled, or plastic container
- wood stick (for stirring)
- string

### *What you do:*

1. Roll newspapers to form thick or thin logs about sixteen inches long. You can include any colored sections. Tie with heavy string, not too tightly.
2. Fill your container about two-thirds full of water.
3. Add common salt to your water—about two pounds for every gallon of water. Stir until dissolved.
4. Put your newspaper logs into the salt solution. Add cones, wood chips, or corncobs to your mixture.
5. Let soak two to three days. Stir occasionally with a wooden stick.
6. Lift out the cones, chips, and corncobs. Turn the logs end to end and leave them in the salt water.
7. Let the cones, chips, and corncobs dry for two or three days. Then put them back in

the salt water again. Repeat the soaking and drying six or seven times.

8. Keep the logs soaking for three to five weeks. Turn the logs from end to end two or three times a week. Remember that the papers will swell, and there should not be too many in a roll.
9. Remove the logs and let them dry completely. One log in an open fire will burn almost the entire evening, throwing out rainbow colors. Wrapped in red paper and tied at each end, they make wonderful gifts.



## Preserving Natural Colors

Have you ever wished you could keep the colors of autumn leaves... or flowers... or bright green foliage? Here are ways to do it.

## Drying Flowers

You can dry roses, zinnias, and most other kinds of flowers, as well as many other plant materials—grasses, wheat, corn tassels, cattails, etc. Pick the flowers and other plants you want to dry when they are looking their best. Don't wait until they start to dry out.

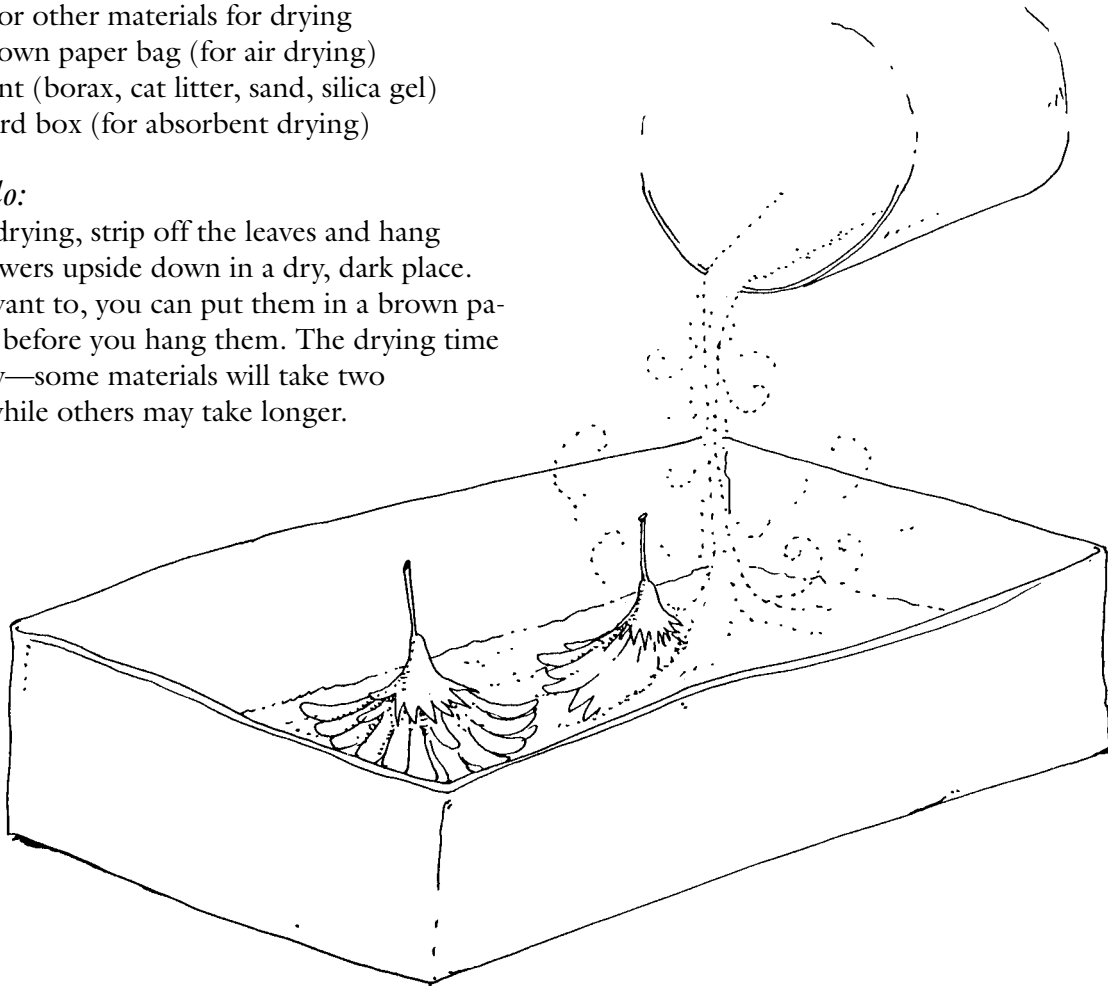
### *What you need:*

- flowers or other materials for drying
- large brown paper bag (for air drying)
- absorbent (borax, cat litter, sand, silica gel)
- cardboard box (for absorbent drying)

### *What you do:*

1. For air drying, strip off the leaves and hang your flowers upside down in a dry, dark place. If you want to, you can put them in a brown paper bag before you hang them. The drying time will vary—some materials will take two weeks while others may take longer.

2. You can also dry flowers with an absorbent. You can use borax or a mixture of one part sand plus two parts borax. Commercial cat litter will also dry flowers. Silica gel is expensive but is very good for violets and other small delicate flowers. Pour a layer of absorbent about one inch deep into the bottom of a cardboard box. Then gently put your flowers upside down on top of this. Carefully pour more absorbent over each flower to cover the flowers about an inch deep.
3. Put your box in a dry place for three to four weeks. Then carefully remove the flowers and dust them off. Use your dried flowers in flower arrangements, group them and frame them, or cover them with glass domes.



## Preserving Leaves

You can use *glycerin* to preserve the leaves of trees like oak, maple, beech, and sycamore—either while they're green or when they've turned yellow or red in the fall. These leaves will keep their colors and stay flexible and shiny for years.

### *What you need:*

- glycerin
- leafy green branches or autumn leaves
- water
- container for glycerin mixture
- paper towels
- iron

### *What you do:*

1. Gather autumn leaves from the trees before they fall. For green leaves, cut leafy branches. Wash foliage to remove dust and dirt, and throw away any damaged leaves.
2. Prepare your foliage. Put autumn leaves between newspapers or paper towels and press with a warm iron. This helps preserve the color of your leaves. For green leaves, crush the tips of the woody stems so they will absorb the glycerin mixture. You can use a hammer, pliers, or a rock.
- 3a. For green foliage, make a mixture of one part glycerin to two parts water. Fill your container about three inches deep with this mixture. Put the crushed ends of your leafy branches into the glycerin mixture. The glycerin is fully absorbed when your leaves take on a glossy look. This may take anywhere from three days to two weeks.
- 3b. For autumn leaves, make a mixture of one part glycerin and nine parts water. Soak your pressed leaves in this mixture for two to three days, or until they are thoroughly soaked. Then remove them from the mixture and press them between layers of paper towels or some other absorbent material.

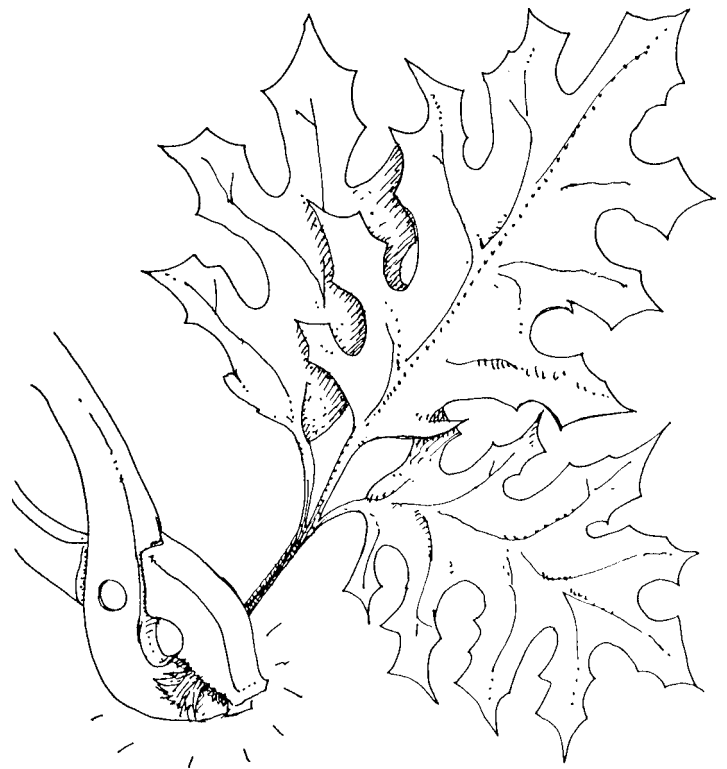
## Preserving Color in Evergreens

### *What you need:*

- sulphate of ammonia (ordinary commercial fertilizer)
- water
- large earthenware, enameled, or glass container
- evergreen branches

### *What you do:*

1. Gather evergreen branches, such as cedar or pine.
2. Make a mixture of one quart sulphate of ammonia to two gallons of water.
3. Soak your evergreen branches in the mixture overnight. They will keep their color and fresh look longer. If you want to treat a Christmas tree this way, let it stand in the mixture for two to three days. You can use treated branches to make wreaths and other decorations.



## Color for a Living... Color for Fun

Color is important for most artists and handcrafters. It's especially important in arts and crafts such as painting—with watercolors, oil paints, acrylics, or any kind of pigments—batik and other dyeing techniques, quilting, candlemaking, and stained glass. Look for examples of these colorful techniques at fairs. Watch for festivals, exhibits, demonstrations, and contests in your area. Check with your library, arts and crafts supply stores, art galleries, or the Web (Internet) for more information or for affiliated organizations. For more information, you may want to write to a specialized organization, such as:

**American Watercolor Society**

<http://www.americanwatercolorsociety.com>

**World Organization of China Painters**

<http://www.theshop.net/wocp.org>

2641 N.W. Tenth St.

Oklahoma City, OK 73107-5400

Phone: 405-521-1234

FAX: 405-521-1265

## Important Words

*Analogous Colors* – Colors that are much alike in hue (next to each other on a color wheel); for example, blue-green is analogous to green and blue.

*Appliqué* (pronounced “*aplikay*”) – Sewing smaller pieces of fabric to a fabric background; something sewed on this way.

*Batik* – A resist dyeing process, using wax to resist the dye.

*Beeswax* – Wax secreted by bees in making honeycomb.

*Color Wheel* – A circular arrangement of colors that shows how different hues are related to each other. Analogous colors are side by side; complementary colors are opposite each other; and the three primary colors are spaced at equal distances.

*Complementary Colors* – Pairs of colors that cancel each other out when mixed together, leaving gray.

*Cool Colors* – Colors that give a feeling of coolness, such as blue and green.

*Glycerin* – A syrupy, colorless liquid made from fats and oils, which can be used as a solvent or a preservative.

*Hue* – The basic name of a color, such as red, yellow, blue, blue-green.

*Intensity* – Brightness or dullness of a color.

*Monochromatic* – Using different tints and shades of the same hue.

*Neutral* – Not having a hue. The three neutral colors are white, black, and gray.

*Paraffin* – A white wax made from petroleum, often used for making candles and sealing jelly.

*Patchwork* – The craft of stitching small pieces of fabric together; anything made by patchwork.

*Piecing* – In patchwork, sewing small pieces together at their edges to make a design.

*Primary Colors* – Three basic hues that can be mixed in various ways to make all the other hues on the color wheel; red, yellow, and blue.

*Resist Dyeing* – Any dyeing process in which parts of the fabric are protected from the dye—for example, by tying knots or by covering with a material such as wax.

*Secondary Color* – A hue made by mixing two primary colors.

*Shade* – A darkened color made by adding black.

*Tie-Dye* – A resist dyeing process in which fabric is tied or folded to protect it from the dye.

*Tint* – A lightened color made by adding white.

*Tone* – A color whose intensity has been reduced by adding its complementary color or gray.

*Value* – The lightness (high value) or darkness (low or dark value) of a color.

*Warm Colors* – Colors that give a feeling of warmth, such as red and yellow.

*Watercolor* – A paint made of a pigment mixed with water; a picture painted in watercolors.

*Wick* – A bundle of threads that soaks up melted wax or other fuel and burns slowly.



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