

chapter 2

WORKING WITH COLOR

Color is everywhere. The vibrant hues or subtle tones of nature delight us again and again. Trees, flowers, sky and water create a colorful background wherever we go.

Color influences us, too. Bright clothes in shop windows attract our attention; billboards sometimes make us look twice. Fabric, neon signs, posters and video machines bombard us with statements in color.

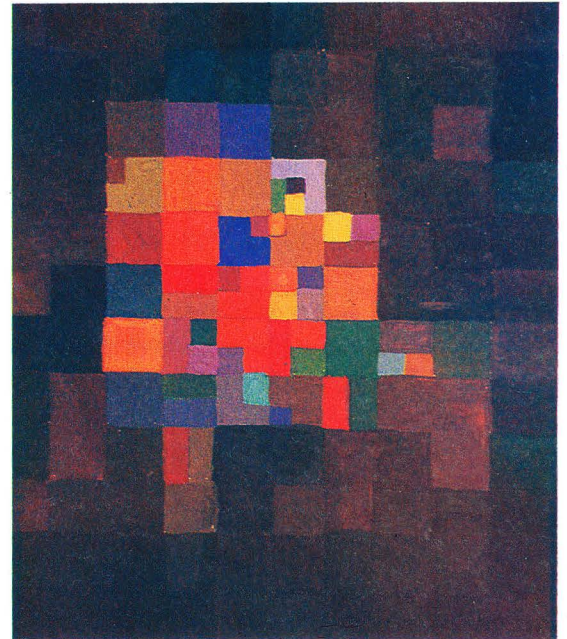
There are literally thousands of different colors—brilliant, dull, pastel and dark. Variations of reds, oranges, yellows, greens, blues and violets make up almost everything we see. An artist notices all these magical hues, selects a few and combines them to create an impression or evoke a certain mood.

As a painter, you will need to choose, eliminate, mix and combine colors. In this chapter you will learn how to select color schemes that “work.” You will also learn that color is powerful: it can make objects in a picture seem to glow, to come forward or recede, to appear bigger or smaller, heavier or lighter.

Your knowledge of color theory will enable you to use color to create the effects you want in a painting.

COLOR THEORY

Color, as you probably know, is a property of light. When we say an object is red, for example, we mean that its surface absorbs certain wavelengths of light and reflects others. If our eyes see only the long wavelengths that we call red, we identify it as a red object. If all wavelengths of light are absorbed, we see a black object; if all are reflected, we see a white one.



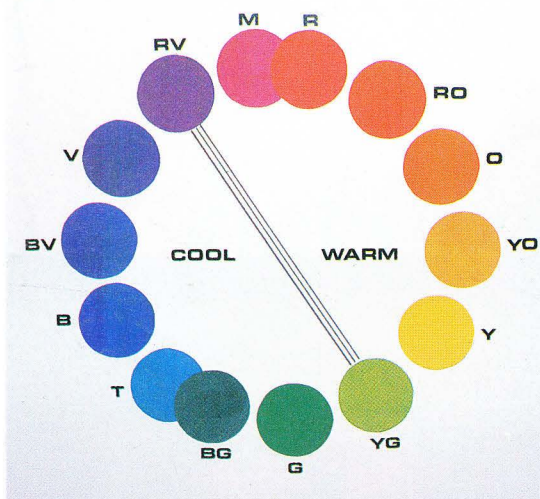
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2. In this tempera color study done in the style of Paul Klee, bright colors advance and dull ones recede, creating movement and depth.

Getting into Painting



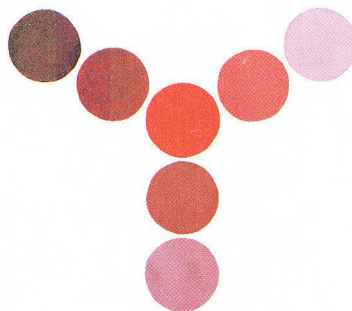
3a



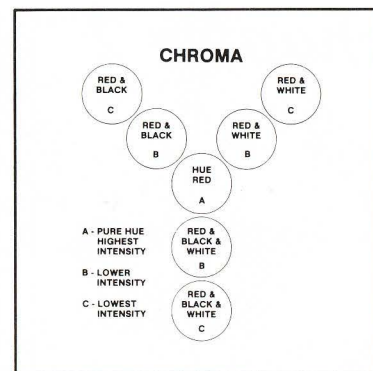
3b

3a and 3b. The colors of the spectrum or rainbow, arranged in a row. When they are curved into a circle, they form a color wheel.

4a and 4b. This chart shows the difference between value and chroma. At the center is the hue red, as you can see in the labeled diagram. The lowest circle in this "y" is a light value of red. Can you see how the red circle in the center is darker in value, yet brighter in chroma, than the lowest circle?



4a



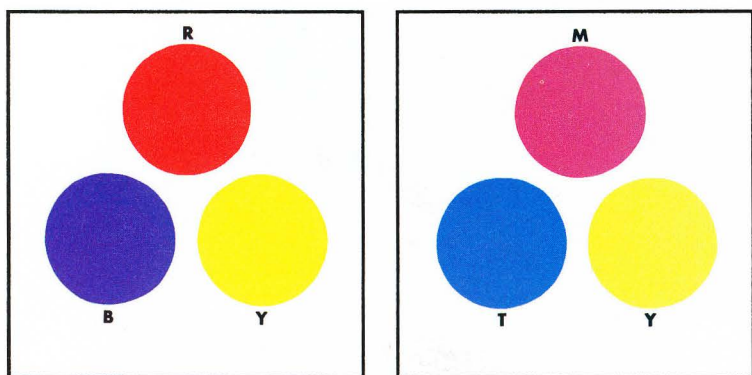
4b

When we talk about color, we are concerned with three basic variables, or characteristics, of each color: *hue*, *value* and *chroma*. *Hue* is the color we see—red, for example. *Value* is the relative lightness or darkness of that color; maroon is a dark value of red, and pink is a light value. *Chroma* is the brightness or intensity of the color, and is difficult to describe in words. Some reds are bright and clear, while others appear muddy or dull. You'll know an intense red when you see one. But try not to confuse intensity with value, or lightness and darkness with brightness and dullness. A light value of red can be less intense, less bright than a dark one, and vice versa. Value and intensity are completely independent of one another.

Words like hue, value and chroma make talking about color easier and clearer. And knowing how a color's value or chroma affects the look of other colors will help you paint more effectively.

THE COLOR WHEEL

In other art classes you may have encountered the color wheel, a system of organizing and classifying colors. The color wheel bends the colors of the visible spectrum (red, orange, yellow, green, blue, violet) into a circle. The colors around the rim of this wheel are hues. Red, yellow and blue are the *primary colors* and are used to mix all of the other hues. Mix two primary colors—red and yellow, for example—and you'll create what is known as a *secondary color*, in this case orange. Mix a primary color (red) with a secondary color (orange) and you'll create red-orange, an *intermediate color*.



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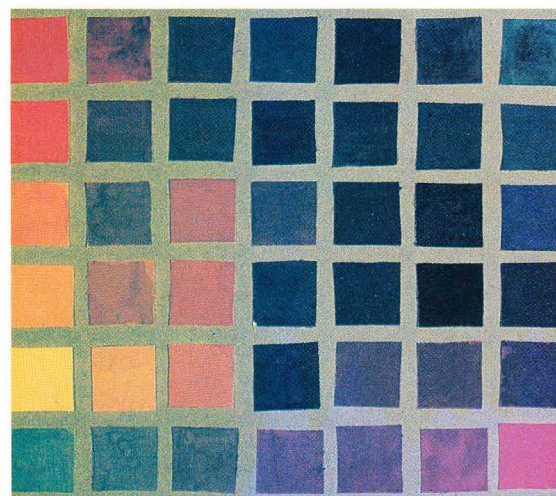
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7

Magenta (a bright, pinkish red), yellow and cyan can serve as the primary colors for an alternative color wheel, if you wish to experiment with them. Even though the results are theoretically the same, the secondary colors (orange, green and violet) produced from this wheel are often brighter.

Colors located across from each other on the color wheel are called *complementary colors*. Red and green are complementary colors, as are blue and orange. Mixing complements together gives you a neutral grayish tone. You can lower the chroma (intensity) of a color by adding a small amount of its complement to it.



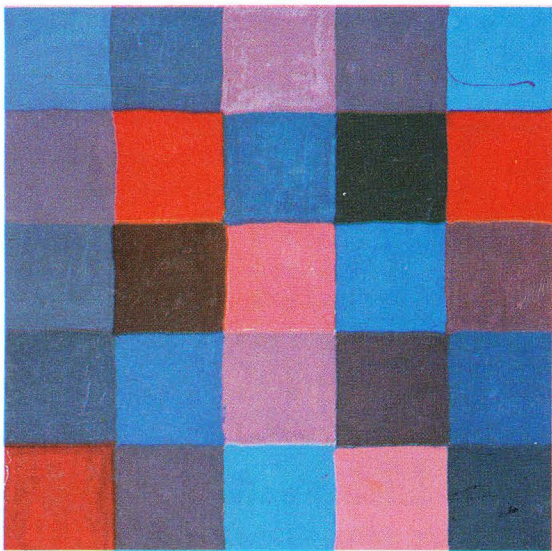
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5. Red, yellow and blue are traditionally thought of as the primary colors — colors that are mixed to produce the other colors of the color wheel. The primary colors cannot produce cyan or magenta.

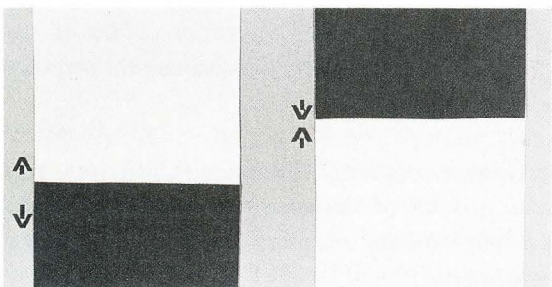
6. With magenta, yellow and cyan, you can also mix all of the colors on the color wheel, although mixing magenta and cyan will yield a less intense blue.

7. A scale of complementary colors showing the hue red, red mixed with a little green, a mixture of equal parts of red and green, green with a bit of red added, and pure green.

8. A chart composed of six sets of complements and the mixtures created from them. It is valuable for a painter to make a chart like this and discover ways to mix complementary colors.



9



10

9. Any set of complementary colors contains both warm and cool colors. Paint a small picture using only one pair of complements plus black and white. Mix twenty-five different hues, tints and shades. Note the different ways you can change the intensity of the colors.

10. These images illustrate some characteristics of light and dark colors. In the image on the left, the black band is heavy and appears to sink, while the white floats on top, creating stability. In the righthand image, the black wants to sink while the white seems to want to rise, creating vertical action, tension or movement.

11. Carole Barnes has used both warm and cool colors in her acrylic collage entitled Hawaii (Ke'e Beach). The red shapes seem to come forward while the cool greens and turquoise recede. Can you find a set of complementary colors in her painting?



11

WARM AND COOL COLORS

Color has temperature—have you noticed that? Red, red-orange, orange, yellow-orange and yellow are *warm colors*. They remind us of fire or the sun and bring excitement and boldness to a painting. Warm colors make objects seem larger and appear to come forward.

Greens, blues and violet are *cool colors* reminiscent of lakes, distant mountains, sky and foliage. They are calm and restful. Cool colors recede into the distance and make objects seem smaller.

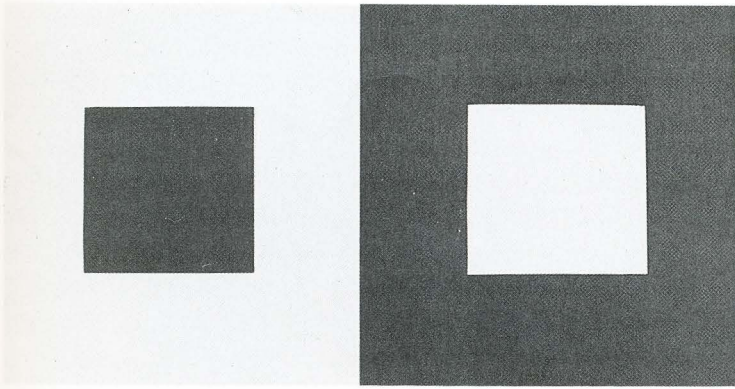
Yellow-green and red-violet can function as either warm or cool colors because they contain elements of both. In a blue and green painting, yellow-green or red-violet would add some warmth, while in a color scheme of warm reds and yellows, they would act as a cooler accent.

Putting both warm and cool colors in a painting—or an interior design, or an outfit of clothes—gives it balance. Add a small area of turquoise to a painting in warm oranges, rust, pink and coral, or an accent of cool green plants to a room with rose walls and reddish brown furniture and you will be combining warm and cool colors for contrast and balance.

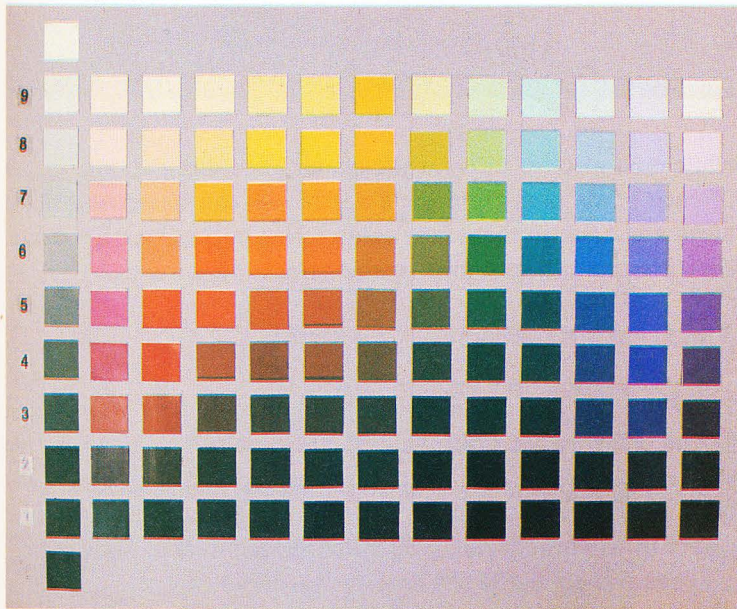
TINTS AND SHADES

When white is added to a hue the resulting color is called a *tint*. For example, pink is the resulting tint when white is mixed with red, and peach is the result of adding white to orange. Adding white also lowers the chroma (intensity) of the hue.

Adding black to a hue produces a *shade*. Navy blue is a shade of blue, maroon is a shade of red.



12



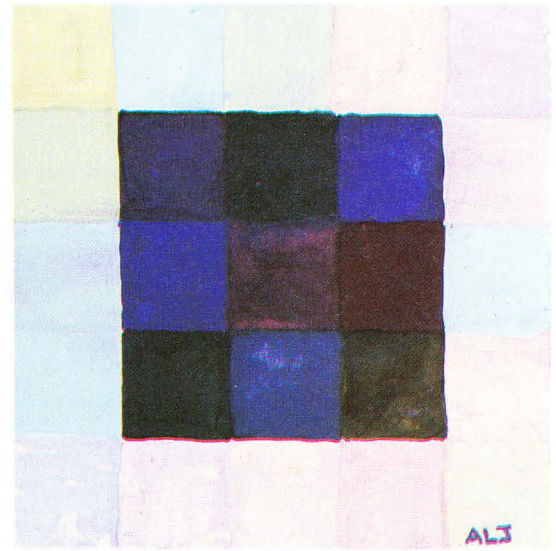
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Tints tend to come forward in a picture. They tend to make objects look bigger and appear to float or rise up in space. Shades, on the other hand, make shapes appear heavy and sink, to seem smaller and to recede or go back.

Altering a hue in this way, making it lighter or darker by adding white or black, is called changing its value. As you'll recall, value is the relative lightness or darkness of a color. In order to compare values, it can be helpful to look at a black and white value scale, which ranges from white (high value or high key) to black (low value or low key), with gray values in the middle. A color value scale is a column of colors produced from one hue: tints appear above the hue and shades appear below.

How can you identify colors of the same value? Try to imagine how the colors would look if you photographed them in black and white. Would they be a similar shade of gray? Squint at the colors. Do they seem to have a similar amount of light reflected from them?

To practice matching values, mix tints and shades of black and

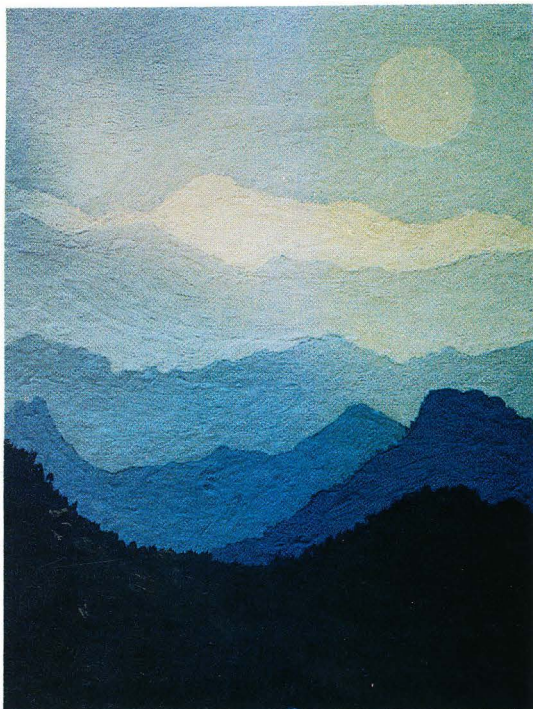


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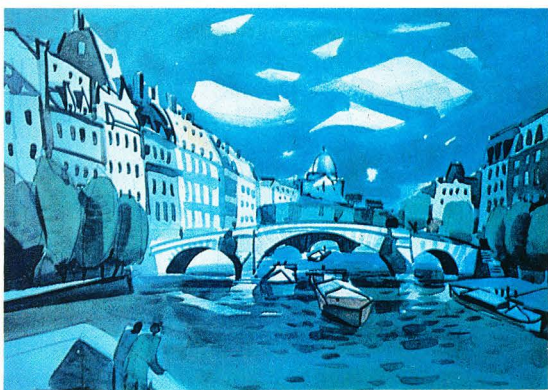
12. Colors are affected by the other colors that surround them. The black square on the left appears smaller than the white square on the right because light colors pop forward and seem larger, while dark colors recede.

13. Surround nine different shades of equal value by sixteen tints of the same value. A black and white photograph or photocopy of your painting will help you decide if your values are accurate.

14. Black and white and color value scales. Each hue is placed on the scale according to its value (its lightness or darkness). The paler the tint, the higher its number, and the darker the shade, the lower its number. For example, yellow has a value of #9 and violet has a value of #4. If you wanted violet and yellow to have the same value, you would either have to choose a pale lavender to match yellow or a deep tan to match violet. Red and green are about at the middle of their value scales.



15



16a

15. Try using mountain ranges or a series of buildings as subject matter for a monochromatic value study. For best results, paint from light to dark.

16a. George Post's watercolor, *Paris*, is a painting that contains much value contrast — the use of dark values against light ones.

16b. The upper half of Janet Gustafson's acrylic on paper, *Hudson Fog*, has extreme value contrast, while the bottom has little.



16b

white on a piece of heavy white paper. Then mix tints and shades of each of six hues from the color wheel. Cut out these painted areas and arrange them into value scales of any length you like. This exercise will also give you practice mixing paint.

VALUE CONTRAST

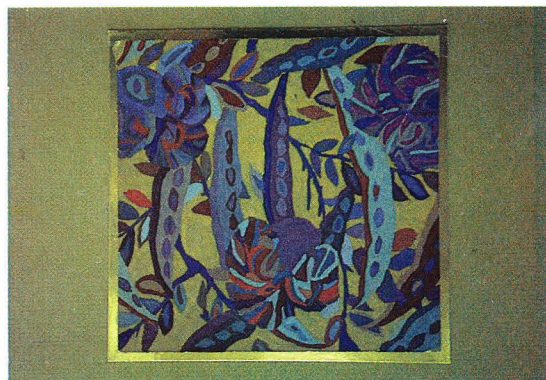
Value contrast means using light colors next to dark ones. When all the colors in a painting are of the same or similar value, the painting is said to have little or no value contrast. This can be visually monotonous, but in some cases the effect is pleasing, because colors of the same value glow when placed next to each other.

When you choose to use colors of widely different values, your painting will have much value contrast. Color becomes of secondary importance in such a painting; what gives the painting its impact is the contrast of light against dark.

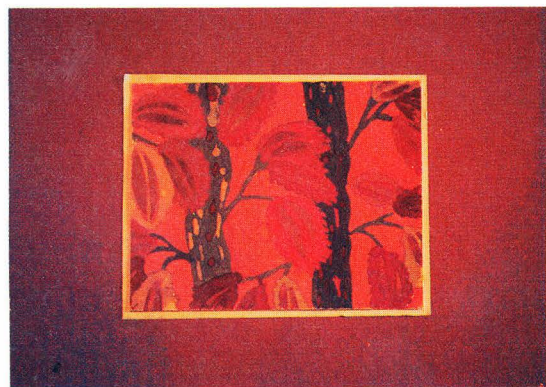
Remember that you can have color contrast in a painting without having value contrast, just as you can have value contrast without color contrast. A red and a green of the same value have color contrast, but no value contrast. Pink and maroon have more value contrast than color contrast. Pink and black have both value *and* color contrast.



18a



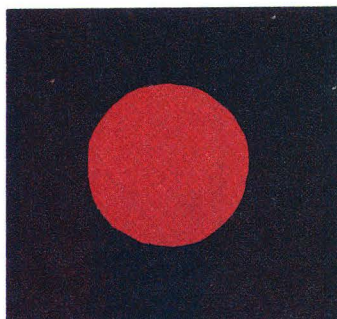
18b



18c

18a-c. Two students selected variations of mustard yellow (18a) as colors that they disliked. Each painted a small picture using that color in context with a carefully chosen color scheme (18b and 18c). They matted their pictures and were pleased with the resulting color harmony. They even responded positively to the mustard color, referring to it as “golden!”

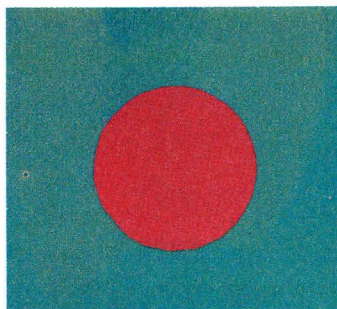
19a-f. The value of the rust-colored circle appears lighter when placed upon black, and darker when against a white background (19a and 19b). The rust color almost appears red-orange when surrounded by blue-green; it looks brown when surrounded by brilliant red-orange (19c and 19d). In 19e and 19f, the rust color looks bright on dull gray-green and seems almost brown against a lighter yellow-orange.



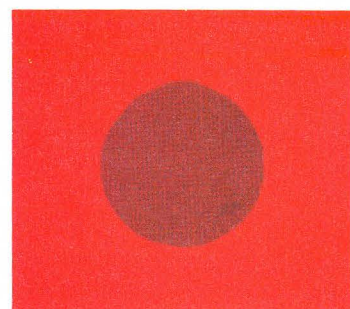
19a



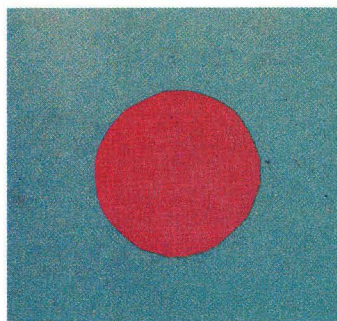
19b



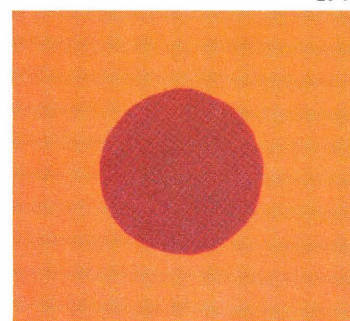
19c



19d

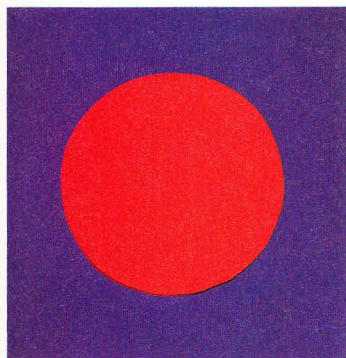


19e

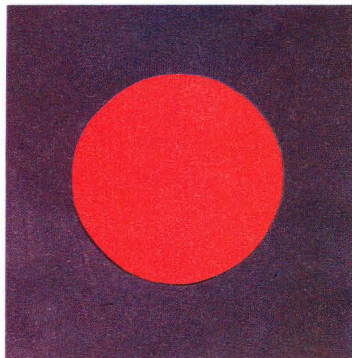


19f

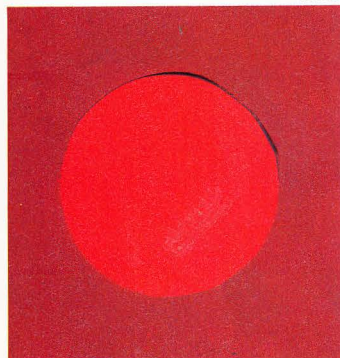
Obviously, a color is affected by the colors that surround it. For example, a dull pink will look brighter if surrounded by a dull greenish-gray of the same value, but it will look grayish if surrounded by a brilliant red-orange. This means a color will look brighter or stronger if placed against its grayed-down complement of the same value. Conversely, if you place a fairly dull color against a bright, intense hue of itself, it will look even duller. Similarly, a color can appear darker or lighter depending upon its environment. For instance, a dull pink painted near white will seem darker than when it is painted near black or any other dark color.



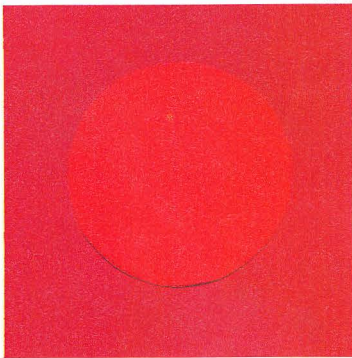
20a



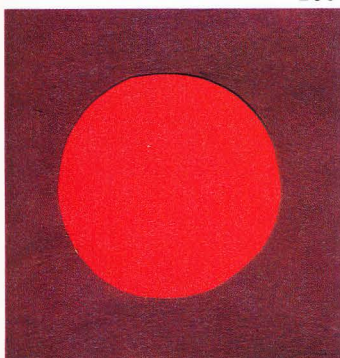
20b



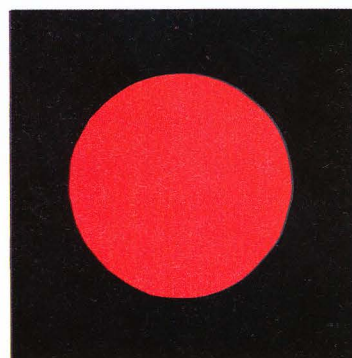
20c



20d

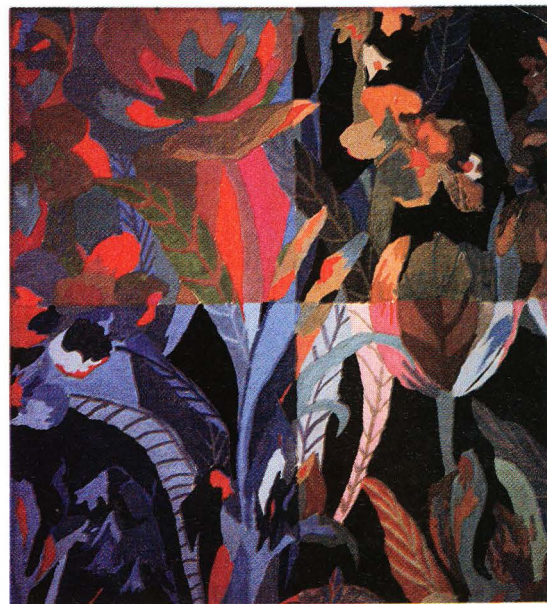


20e



20f

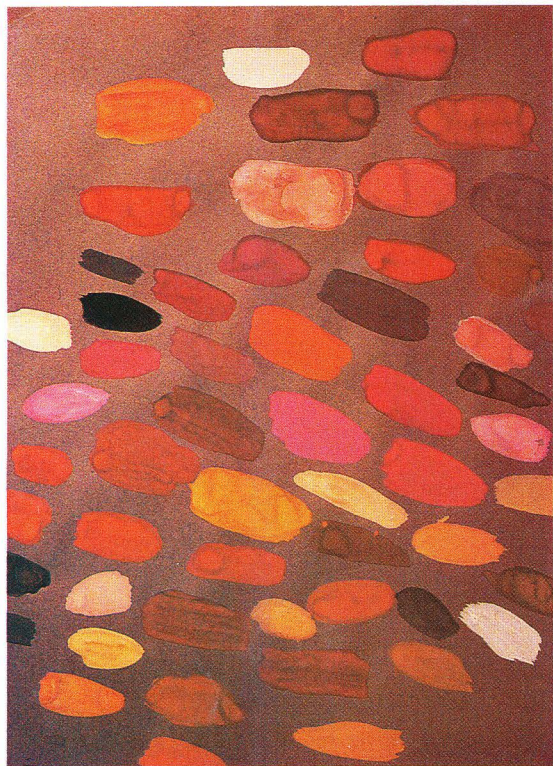
There are also ways to make colors glow or sparkle. One way is to surround it with its complement of the same value. For instance, if you place a bright red against a green of the same value, the colors seem to dance or vibrate. Another way to make a color glow is to put it against its grayed-down complement of the same value—like placing a bright red against a dull green. A color will also glow if it is surrounded by a dull version of itself (e.g. red next to reddish brown). Remember, you can dull a color by adding to it: its complement, black or any muddy color. Gray or almost any color of the same value will make colors sparkle. Black also has the same effect. When colors glow, there is little value contrast; shapes do not show up as clearly as when there is a lot of contrast between dark and light.



20g

20a-f. This spot of red-orange (top row) glows because it is surrounded by a complementary color of the same value (a) and by a dulled version of that complement (b). In the middle row, the red-orange glows because it is placed upon a duller shade of itself (brown) and upon another shade of the same value. A gray of the same value, as well as black, also causes the red-orange to sparkle (bottom row). Choose a hue and make it glow by surrounding it with six different colors. Do the same with other hues, tints or shades.

20g. This floral painting is divided into four small squares, or quadrants. The color scheme is composed of one set of complements (red-orange and turquoise), one adjacent color (green, which is next to the turquoise), black and white. In the upper quadrant, the colors glow because they are of the same value. In the other three quadrants, some colors glow, but because there is great value contrast in some areas, shapes are emphasized.



21

21. When planning a color scheme, try it out on a sample paint chart. Here, analogous colors (red, red-orange, orange, yellow-orange) are combined with black and white. Gray paper of middle value was chosen for the paint chart because the final painting was done on gray paper.



22a



22b

22a. A monochromatic scheme, using one hue with tints and shades, relies heavily on value contrast to create interest, depth and movement. A monochromatic scheme is one of the most effective color schemes for the beginning painter. *Napali Cliffs*, by Ande Lau Chen, is an acrylic and rice paper collage with many values of blue-green, and touches of yellow-green for warmth.

22b. More variety is possible in an analogous color scheme, which uses several hues next to each other on the color wheel. Red-violet warms the cool greens and blues in this student tempera painting. The colors glow because there is little value contrast.

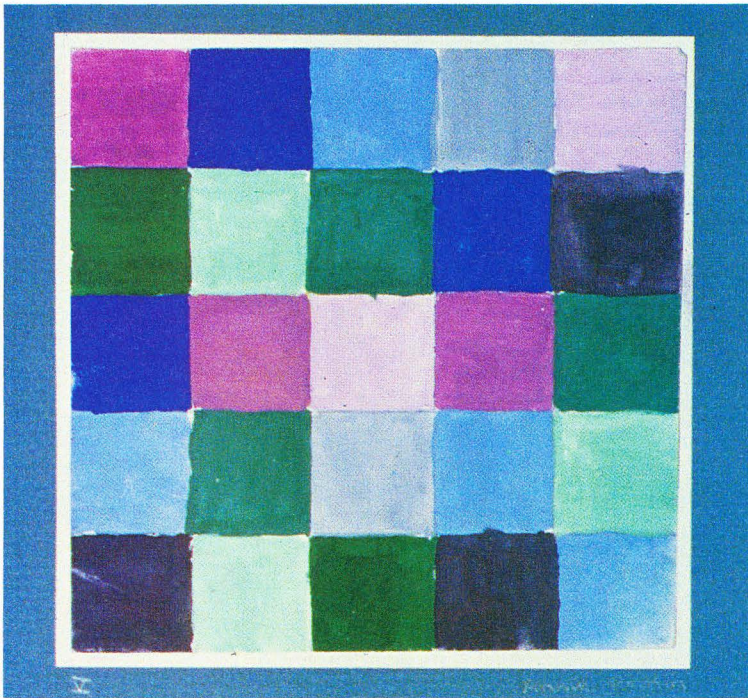
CHOOSING COLORS AND COLOR SCHEMES

Now that you have a grasp of how colors can be mixed and how they work together, you can begin to choose color schemes for your paintings with some expertise.

First, consider the mood or feeling you wish to express. Do you want hot, bright, bold colors that make an exciting or happy statement? Or do you prefer a soft, delicate, airy ambience? Perhaps you'll want to use dark, dull shades to convey an aura of mystery or cool colors to produce a peaceful and calm painting. It is important to decide upon the atmosphere or mood you want to create before you choose specific colors.

Once you know the mood you want to convey, think about colors that suggest that mood. If you used all the hues on the color wheel in one painting, the result would probably be confusing. Just as a chef chooses a few seasonings for a dish and does not use every spice on the rack, so a painter must select a few colors and eliminate many others. In painting, sometimes "less is more."

There are many ways to choose and eliminate colors systematically. A monochromatic color scheme makes use of only one hue



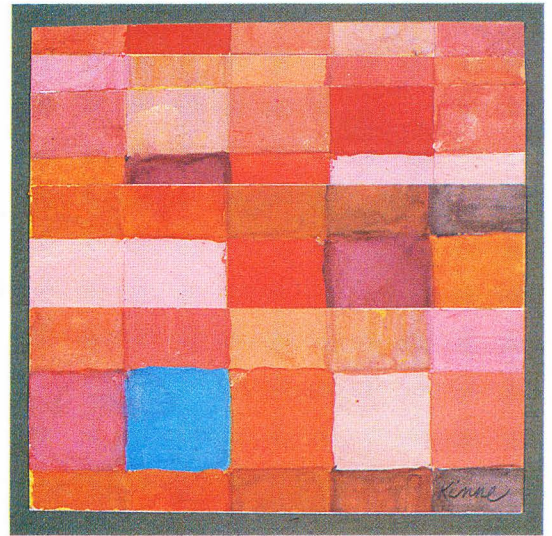
23



24

and its tints or shades. This may seem monotonous, but it can produce surprisingly appealing pictures. A similar but more colorful approach is an *analogous* color scheme, made up of three touching colors on the color wheel, such as green, yellow-green and yellow.

A set of complementary colors plus black and white, or two colors next to each other on the wheel plus their complements, with all the resultant tints and shades, make attractive schemes.

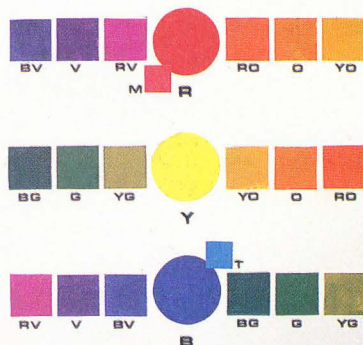


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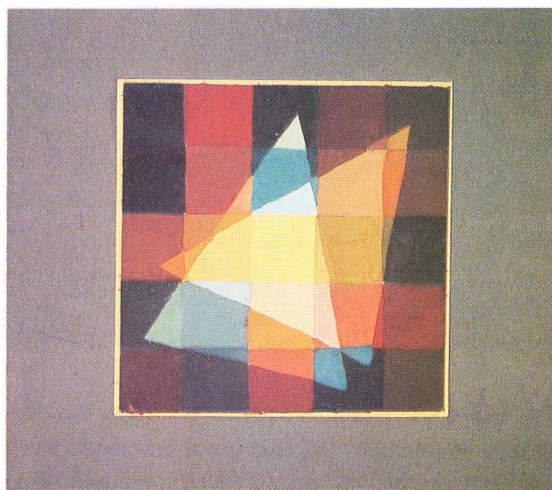
23. On a five-inch square of heavy paper or mat board, using a format of twenty-five one-inch squares, paint a modified monochromatic scheme with much value contrast. Then try an analogous scheme, but limit the value contrast.

24. One set of complementary colors, yellow-orange and blue-violet, plus black and white were used in this neutral toned architectural painting. Shadows are shades, and add interest and value contrast.

25. Try several small paintings of your own using these complementary systems. Choose your colors and add black and white. Paint some with value contrast, some without. Geometric squares or simple architectural drawings work well. Use fairly thick paint, and don't paint wet areas next to each other or colors will run together.



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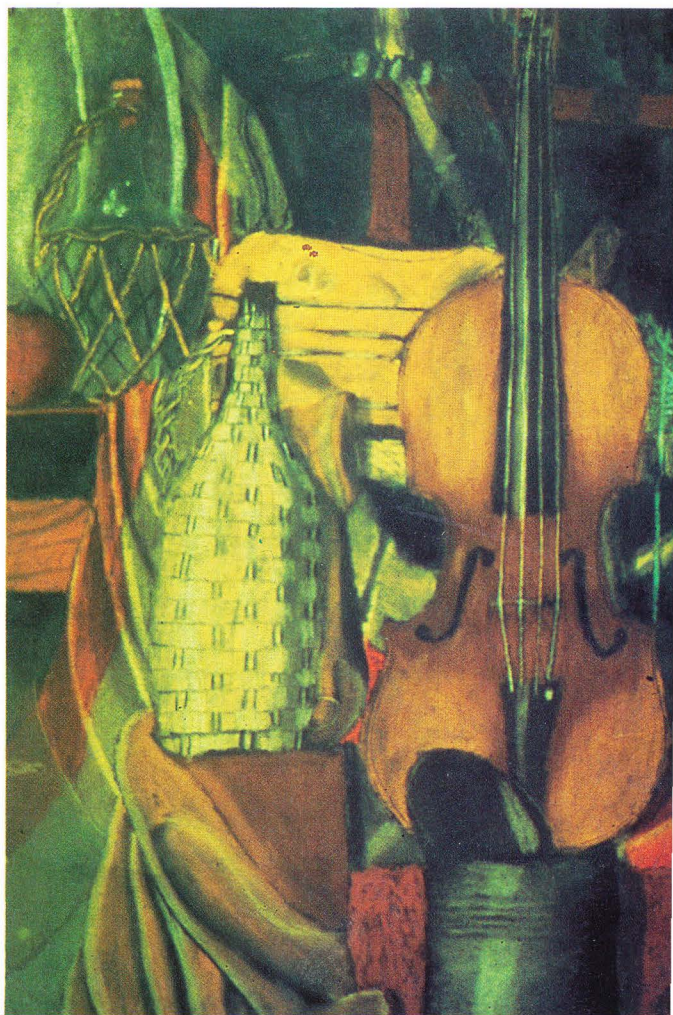


27

26. The red, yellow and blue color families. Each family is made up of one primary color plus all the other colors in the color wheel that contain that primary color.

27. Can you tell which color family the student used in this tempera painting?

28. The warm glow of the yellow color family permeates this pastel still life. The student emphasized value contrast.





29

You can also use *color families* to determine your color scheme. There are three color families, created from each of the three primary colors. The red color family, for example, includes all the colors on the color wheel that have red in them: red-violet, blue-violet, red, red-orange, orange and yellow-orange. The yellow color family is made up of all the colors that have yellow in them, and the blue family includes all colors with blue in them. Using all or part of a color family, plus black and white, will result in a painting that glows with one dominant hue. Notice, however, that each family contains both warm and cool colors.

One of the most exciting color schemes can be created by eliminating four analogous colors (colors next to each other on the color wheel). You will find that the eight remaining colors, plus black and white, give you a very complete palette. For example, if you eliminate blue, blue-violet, violet and red-violet, you can still create wonderfully harmonizing colors, including a soft blue obtained by mixing magenta and blue-green (or turquoise). Eliminating colors teaches you to improvise and experiment — and you'll probably be surprised at the results.



30

29. In Carolyn Lord's sparkling watercolor, *Spring Breezes*, all the colors that appear could be mixed by eliminating the four analogous (or touching) colors, blue, blue-violet, violet and red-violet, from the palette. Intermixing the remaining colors of the color wheel with black or white creates a wide array of colors.

30. It is worthwhile to spend some time painting charts like this one. After eliminating four analogous colors (colors next to each other on the color wheel), make a chart that shows every possible combination of the eight remaining colors and their tints and shades. Make another chart by eliminating four other analogous colors, and so on, until you've made twelve charts. Tempera paints in an egg carton (See the chapter on tempera) are easy to mix, and gray construction paper of a middle value gives best results. You can refer to your paint charts again and again to devise color schemes for your paintings.