Vocabulary

pigments
binder
solvent
dyes

Understanding the Nature and Uses of Color

Artists use color to create special effects in art. Not only do they use color to depict objects the way they actually look, but artists also use color to express ideas and emotions **(Figure 6.22).** By experimenting with color, you will learn what it can do, and you will learn how to use it so that you achieve the results you want. Understanding the nature and uses of color allows you to express yourself artistically.

Paint

All paints used in art are made up of three basic ingredients: pigment, binder, and solvent. Artists' **pigments** are *finely ground, colored powders that form paint when mixed with a binder.* Pigment colors cannot match the purity and intensity of the colors of light. The **binder** is *a material that holds together the grains of pigment* in a form that can be spread over some surface. Linseed oil is the binder for oil paints. Wax is used for encaustic paint, gum arabic for watercolor paints, and acrylic polymer for acrylic paints. A chemical emulsion is used to make school tempera paint. Many professional artists use a traditional method of mixing pure pigments with egg yolk for a translucent tempera paint. These binders each give different qualities to the paint.

The **solvent** is *the liquid that controls the thickness or the thinness of the paint.* Turpentine is the solvent for oil paints. Water is the solvent for watercolors and tempera. Water or acrylic medium is the solvent for wet acrylic paints, but once acrylic paint dries, it is waterproof.

Paint pigments do not dissolve—they remain suspended in the binder. When applied, the pigments stay on top of the surface and dry there. *Pigments that dissolve in liquid* are called **dyes.** Dyes do not remain on the surface as paints do. Dyes sink into and color the surface by staining it.

Visual Effects of Paint

The pigment, the binder, the solvent, and the surface to which the paint is applied all affect the color you see. Wet colors look brighter and darker than dry ones. Tempera and watercolor paints look duller and lighter after they dry. Oil paints glow even when dry because of their oil binder. If diluted with turpentine, oil paints dry to a dull finish.

The color and density of the surface receiving the paint affects the way the light waves will be reflected back to your eyes. If you apply red paint to a colored surface and to a white surface, your eyes will perceive the red paint differently on each surface. The colored surface absorbs some light waves, whereas the white surface reflects all light waves.

Have you ever tried to match colors that are on two different surfaces? A brown leather bag can never truly match a fuzzy brown sweater. Dense surfaces always look brighter because they reflect more light.

MEET THE ARTIST

ELIZABETH MURRAY

American (b.1940)

Elizabeth Murray was born in Chicago in 1940. From an early age, she showed an interest in art, which her parents encouraged. In elementary school she sold drawings of elephants, cowboys, and stagecoaches to her classmates for 25 cents apiece. This early success kept her interest in art alive.

A high school teacher recognized her talent and created a scholarship for her at the Art Institute of Chicago. Murray took classes in figure drawing, landscape painting, and traditional techniques. She walked through the exhibit halls of the Art Institute museum. Surrounded by masterpieces, she was inspired to become a painter.

In the 1960s, she was told that painting was dead. Everything that could be done had been done. Murray refused to listen and kept painting. Through her perseverance, she developed a style that combines painting with sculpture. Murray is now considered a master of the shaped canvas.

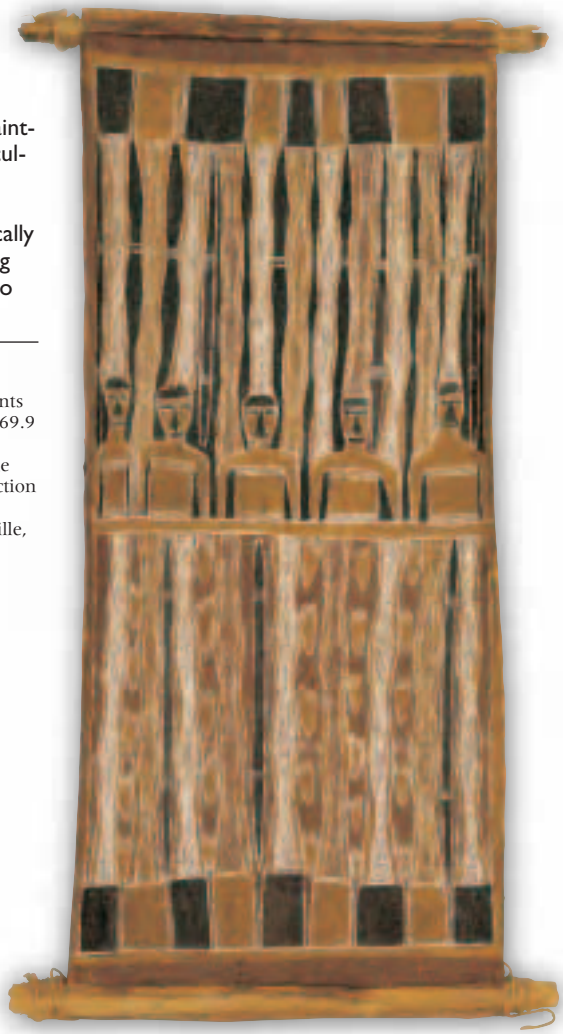
◀ **FIGURE 6.22** Murray has used a complementary color scheme for her artwork. Although this kind of color scheme can sometimes be loud and demanding, the artist has reduced the intensity of the colors. How has she done this? Why do you think she has chosen this color scheme?

Elizabeth Murray. *Things to Come.* 1988. Oil on canvas. 292.1 × 287 × 68.6 cm (115 × 113 × 27″). Paula Cooper Gallery, New York, New York. Private Collection, San Francisco, California.

Sources of Pigment

In the past, pigments came from animals, vegetables, and minerals. A kind of beetle and the root of a certain plant were both sources for red pigment. Another plant produced a deep, transparent blue. Ultramarine blue was made by grinding a semiprecious stone. The color ocher was created by using natural clay colored by iron rust.

Today, synthetic (artificially made) pigments have been developed by scientists. The synthetics are brighter and more permanent than natural pigments, but some artists still prefer to use natural colors **(Figure 6.23).** Many weavers color their yarns with natural dyes. Some contemporary painters use only natural earth pigments.



▶ **FIGURE 6.23**
Aboriginal bark paintings enjoy a long cultural tradition in Australia. Like this one, they are typically created by applying natural pigments to eucalyptus bark.

Yäma Mununggiritj. *Yellow Ochre Quarry.* 1961. Natural pigments on eucalyptus bark. 69.9 × 30.5 cm (27½ × 12″). The Kluge-Ruhe Aboriginal Art Collection of the University of Virginia, Charlottesville, Virginia.

Activity **Mixing Colors**

Applying Your Skills. Collect and grind three of your own earth pigments (see Technique Tip 11 on page 432 in the Handbook). Mix them with a binder and solvent and experiment with them. Try using a variety of brushes and surfaces. Finally, paint a design that shows all the colors you can obtain from the pigments.

Computer Option. Mixing colors with light on a computer is very different from mixing colors with pigment. If your computer software has the capabilities, practice making secondary and intermediate colors. Also mix tints, shades, and intensity changes. Fill a variety of geometric shapes with all the new colors you have made, and show off your work by filling your screen with repeated shapes.

The Expressive Effects of Color

Artists use color in the language of art. They use color to express thoughts, ideas, and emotions. There are many ways to use color to convey feelings, and realistic representation is only one of them.

Optical Color

Sometimes artists reproduce colors as they see them. Until the late nineteenth century, this was the way most Western artists painted. Artists would try to capture color as it actually appeared. As we saw earlier in the chapter, colors can change depending on their surroundings. For example, in an automobile dealer's showroom, the color of a blue car is affected by the light, the color of the floor and the walls, and even the colors of the other cars. The car may sparkle as it reflects the showroom

lights. Shadows on the car may look dark blue or blue-violet. The red from the car next to it may cause a red-violet reflection on the blue surface.

A painter who is trying to show the car in its setting will use all the colors involved. He or she will make use of *optical color,* the color that results when a true color is affected by unusual lighting or its surroundings. Optical color is the color that people actually perceive. Compare the two paintings by Claude Monet in **Figures 6.24 and 6.25** to see how the time of day affects color.

The Impressionists were deeply involved with optical color and its relationship to light. They tried to express the sensation of light and atmosphere with their unique style of painting. They applied dots and dabs of colors from the spectrum. They did not mix black with any colors. They made gray, low-intensity colors by putting complements together instead of mixing just black and white. These low-intensity grays, such as dull blue and dull green, are much richer and look more natural in landscapes than do grays made by mixing black and white.

▲ **FIGURE 6.24** Monet was one of the first artists to paint outdoors. He realized that the colors of a scene changed as the sunlight changed; so he carried several canvasses to record the same scene at different times of the day.

Claude Monet. *Rouen Cathedral, West Façade*. 1894. Oil on canvas. 100 × 66 cm ($39^{3}/_{8} \times 25^{15}/_{16}$″). National Gallery of Art, Washington, D.C. Chester Dale Collection.

▲ **FIGURE 6.25** This is Monet's same view of the Rouen Cathedral façade painted in a different light than Figure 6.24. Compare and contrast this painting to Figure 6.24. Explain how the changes in color affect the mood of each work.

Claude Monet. *Rouen Cathedral, West Façade, Sunlight*. 1894. Oil on canvas. 100 × 66 cm ($39^{3}/_{8} \times 25^{15}/_{16}$″). National Gallery of Art, Washington, D.C. Chester Dale Collection.

Arbitrary Color

When artists use color to express feelings, they usually ignore the optical colors of objects. They choose the colors *arbitrarily,* that is, by personal preference. They choose arbitrary colors rather than optical colors because they want to use color to express meaning **(Figure 6.26).** In abstract art, color is teamed with the other elements to become the subject as well as the meaning of the work (see Figure 6.1 on page 134 and Figure 6.28 on page 156).

Colors affect feelings. Light, bright colors can create happy, upbeat moods. Cool, dark colors can express mysterious or depressing themes. Warm, low-intensity earth tones seem comfortable and friendly. They are often used to decorate rooms in which people gather. A unique, light value of red-orange has been used to soothe people and has even been successful in calming violent prisoners. Blue is also known for its soothing qualities. Bright yellow is stimulating and pure red excites.

▲ **FIGURE 6.26** Marc developed a personal theory of color symbolism. He believed that different hues symbolized different meanings. Yellow was a gentle, cheerful color, and for him, it symbolized women. He thought blue represented the spiritual and intellectual man. He said that red represented matter, and in this work, it symbolized the earth. Green served to complement the red.

Franz Marc. *Yellow Cow*. 1911. Oil on canvas. 140.7 × 189.2 cm (55 3/8 × 74 1/2″). The Solomon R. Guggenheim Museum, New York, New York.

▲ **FIGURE 6.27** Look at the different objects on the table. Identify the number of colors used for each object. Notice how the artist has used dark blue lines to outline the fruit and make each piece stand out. Does this use of color make the objects seem real?

Paul Cézanne. *The Basket of Apples.* c. 1895. Oil on canvas. 65.5 × 81.3 cm (25¾ × 32″). The Art Institute of Chicago, Chicago, Illinois. Helen Birch Bartlett Memorial Collection. (1926.252).

Artists today have put their knowledge of color psychology to work to develop unusual methods for using color. Many of their choices are personal—they make color say what they wish to express.

Space

The placement of warm and cool colors can create illusions of depth. Warm colors advance toward the viewer, and cool colors seem to recede and pull away. The French artist Paul Cézanne painted a cool, blue outline around the shape of a warm, round orange. The fruit seemed to be pushed forward by the surrounding blue background **(Figure 6.27).**

Movement

Color can create a sense of movement. When the values in a work jump quickly from very high key to very low key, a feeling of excitement and movement is created (**Figure 6.28**, page 156). When all the values are close together, the work seems much calmer. Today's artists use color to create movement and depth in abstract art.

When you work with color to create movement, remember to use values of pure hues as well as those of tints and shades. You will need to remember, for instance, that the pure hue yellow is much lighter than red or blue.

LOOKING CLOSELY

Jumps in Color Value Create Visual Movement

This is one of Stuart Davis's first abstract works that celebrates his love for New York City. Davis has used strong jumps in value (from bright white, pale blue, and yellow to red, black, and orange) to make your eyes jump around the work. He wants you to feel the excitement and movement of the city. This diagram indicates some of the value jumps. Where can you find others?

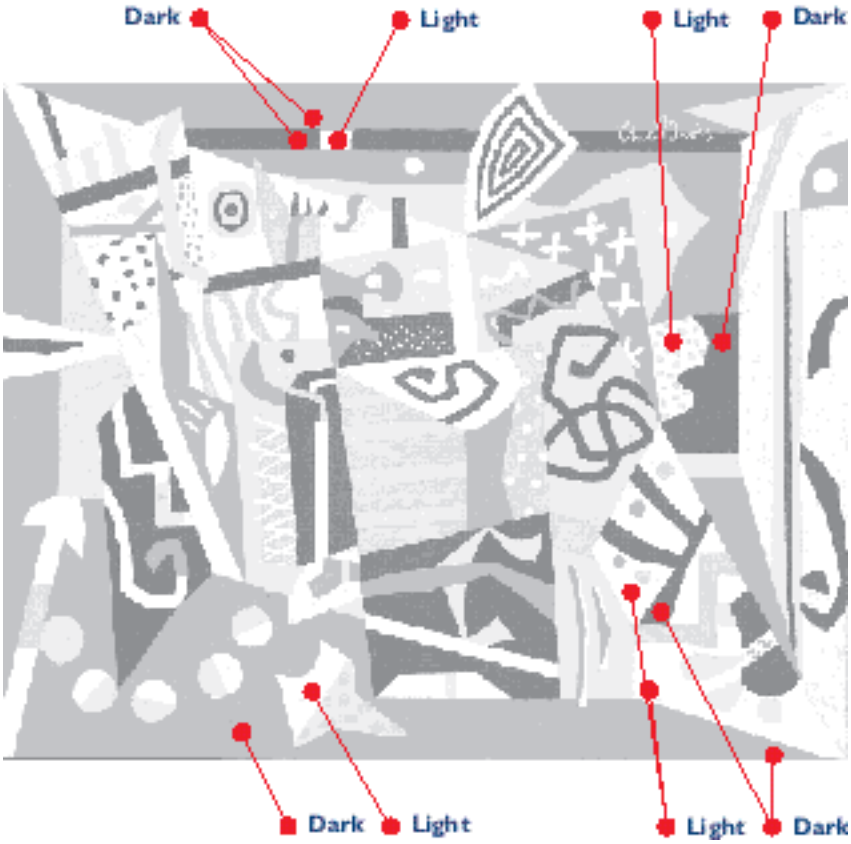


FIGURE 6.28

Stuart Davis. *Hot Still Scape for Six Colors–7th Avenue Style, 1940.* 1940. Oil on canvas. 91.4 × 113.9 cm (36 × 44⅞″). Museum of Fine Arts, Boston, Massachusetts. Gift of the William H. Lane Foundation and the M. and M. Karolik Collection, by exchange, 1983.120. © Estate of Stuart Davis/Licensed by VAGA, New York, NY.

Activity: Using Color for Effect

Demonstrating Effective Use of Art Media in Drawing. Create four small sketches of trees with leaves. Use a simple color medium such as crayon. Color each sketch to illustrate one of the following: true color, arbitrary color, tonality, optical color, depth through the use of warm and cool colors, or movement through value.

Computer Option. Using the tools of your choice, draw and label six sketches of trees or leaves. Let each sketch illustrate one of the following: true color, optical color, color that expresses personal feelings, depth through the use of warm and cool colors, movement through value, or tonality.

Evaluate the results of your work. Develop your favorite sketch into a finished drawing.

Tonality

Sometimes an artist lets one color, such as blue, dominate a work. In such a case, the work is said to have a blue *tonality* **(Figure 6.29).** To have a certain tonality, the painting does not have to be monochrome. Other colors may be present. The overall effect of the work, however, will be of one color. Tonality has a unifying effect.

Check Your Understanding

1. All paints are made up of what three basic ingredients?
2. What is the difference between paint pigments and dyes?
3. Select and analyze two artworks from this lesson. What is the meaning of the color choices?

FIGURE 6.29 The blue tonality of this work conveys the cool impression of the water. The jellyfish are spots of contrast in the blue water. Although blue is the dominant color in this painting, other hues are used. What are they?

Childe Hassam. *Jelly Fish.* 1912. Oil on canvas. 35.8 × 43.8 cm (14 1/8 × 17 1/4″). Wichita Art Museum, Wichita, Kansas. The John W. and Mildred L. Graves Collection.