Chapter Objectives
After studying this chapter, you will be able to:
- analyze the psychological impact and meaning of different colors.
- summarize how color influences human behavior.
- analyze and describe the relationships between colors on the color wheel.
- evaluate the use of color harmonies in planning interior designs.

Terms to Learn
- color
- color spectrum
- color wheel
- primary colors
- secondary colors
- tertiary colors
- hue
- value
- tint
- shade
- tone
- intensity
- complement
- pigment
- warm colors
- cool colors
- color harmony
- monochromatic color harmony
- complementary color harmony
- split-complementary color harmony
- double-complementary color harmony
- analogous color harmony
- triadic color harmony
- neutral color harmonies
- color scheme

Reading with Purpose
On a separate sheet of paper, write down the main headings from this chapter. Leave space for note-taking under each heading. As you read the chapter, write down three key points you learn from each section. Then answer the following: How does this information relate to what I already know about color?
In the previous chapter, you learned about the elements of design—line, form, space, mass, and texture. In this chapter, you will learn about another element of design—color. Color is likely the most important element of design. Deciding what color to use is usually the first decision made when designing a room. It is one of the first things others notice about your design. Color sets the mood in a room and leaves a lasting impression with most people.

Understanding Color

Color is an element or property of light. It can help you create certain moods in your home by communicating excitement, calmness, mystery, or other sensations and emotions. When you understand the effects of color, you can use it to make your personal living space attractive and satisfying, 11-1.

The Psychology of Color

Each color has certain psychological effects on people and can evoke certain feelings. Factors that can influence peoples’ reactions to color include age, gender, culture, and life experiences. Although there is no single specific system for identifying ways all people respond to color, some of the effects for each of the following colors may include:

- **Red** is associated with power, danger, fire, strength, and passion. It is bold, aggressive, exciting, and warm. It demands attention. Red can make you feel energetic. However, too much red in a room can be overpowering.
- **Orange** is hopeful, cheerful, warm, and less aggressive than red. It expresses courage and hospitality. It can make a room feel energetic and friendly.
- **Yellow** is friendly, happy, and warm. It is associated with sympathy, sunlight, prosperity, cowardice, and wisdom. Yellow rooms are cheerful, light, and airy. However, pure yellow draws attention due to its brightness, so take care when using it in large amounts.
- **Green** is the color of nature. Consequently, it is refreshing, friendly, cool, and peaceful. Additional meanings include hope, good luck, and envy. Green mixes well with other colors and looks especially good next to white.
- **Blue** is cool, quiet, and reserved. It is associated with tranquility, serenity, and formality. Blue can be soothing and peaceful. It can be especially pleasing when used with white. However, too much blue in a room can be depressing.
- **Purple** is a royal color. It is dignified and dramatic. It works well with most other colors.
- **Black** is sophisticated and mysterious. It is associated with wisdom, evil, and death. Small amounts of black help ground a room, or may add a timeless, classic elegance. When used in large quantities, however, black may be oppressive.

Color Psychology at Work

Color is a vital tool for interior designers because it impacts how people feel. Vibrant colors, especially oranges and reds, enliven the seating areas of many fast-food restaurants. They tend to stimulate customers’ appetites.

Designers working for clients in various industries use color to achieve other goals. For example, designers of airplane interiors avoid using large expanses of fast-food reds and oranges. Their goal is not to stimulate appetites, but to create a relaxing environment for passengers. Neutrals and muted shades often work well. In hospital rooms, color is used to create spaces that do not raise anxiety or trigger depression among ill or injured people.

In residential settings, designers often use the color blue in bedrooms because it is associated with rest and relaxation. Blue is also associated with wisdom, knowledge, and faith. White can make rooms look crisper and livelier.

- **White** is fresh, peaceful, and pure. It is associated with youth, innocence, and faith. White can make rooms look crispier and livelier. People feel most comfortable when colors in their surroundings reflect their personalities. For instance, outgoing people might choose bright red or yellow for the main color in a room. Shy people might feel awkward in a red room. Instead, they might prefer a room that features a soft blue or green.

When making color decisions for your home or the home of a client, consider the preferences of each family member. No single color will satisfy everyone. However, the color and design of the social area of the home should make all members feel as comfortable as possible. Use individual color preferences in personalized sleeping areas and other private work or play spaces.

**The Color Spectrum**

The color spectrum is the full range of all existing colors. A beam of white light produces spectral colors as it passes through a prism. Although limitless in number, more than 10 million colors have been identified in the color spectrum. Each distinct color derives from a few basic colors. The rainbow in 11-2 is the ideal example in nature of how sunlight can separate into a continuous band of colors, or a spectrum. In the case of a rainbow, the raindrops themselves serve as tiny prisms separating the light.

The variety of colors possible in nature is virtually limitless. Paint manufacturers have translated the spectrum into several hundreds of different paint colors, 11-3.

**Activity**

Borrow a prism from the science department. Experiment with dividing light into its component colors.

**Discuss**

Why do you think a person feels most comfortable when surrounded by colors that reflect his or her personality?
lightness or darkness of a hue. The middle ring of the color wheel shows the normal values of hues. The normal values of some hues are lighter than the same sentence.

The lightest color on the color wheel is yellow and it is always at the top of the wheel for that reason. Violet is the darkest color on the color wheel. It is directly opposite from yellow at the bottom of the wheel.

Color Characteristics

Each color has three characteristics: hue, value, and intensity. Various tools illustrate these characteristics. For example, the color wheel shows hues and some values. Separate scales, such as the color rendering index (CRI), show color values more completely as well as color intensity. You will learn more about the color rendering index in Chapter 17.

Hue

A hue, or color name, is the color in its purest form, with no added black, gray, or white. It is the one characteristic that makes a color unique. It is what makes red different from blue and green different from yellow. It is the specific, individual nature of each color.

Value

The value of a hue is the relative lightness or darkness of a hue. The middle ring of the color wheel shows the normal values of hues. The normal values of some hues are lighter than the normal values of others. For instance, yellow has the lightest normal value of any color in the middle ring of the wheel. As you move away from yellow on the color wheel, the normal values of hues become darker. Violet has the darkest normal value.

Adding white to a hue makes its lighter. The addition of white to a hue produces a tint. For instance, pink is a tint of red. Adding white to red creates pink. Adding white to blue creates baby blue, a tint of blue. Peach is a tint of orange. Lavender is a tint of violet. The innermost ring of the color wheel shows the tints. Lighter tints require the addition of more white.

You can make the value of a hue darker by adding black. The addition of black to a hue produces a shade. For instance, burgundy is a shade of red. Adding black to red creates this shade. Navy blue is a shade of blue and is created by adding black to blue. Darker shades require the addition of more black. The outer ring of the color wheel shows the shades. Refer again to the color wheel to identify the normal value of hues, tints, and shades.

Adding gray softens the value of a hue. Adding gray to a hue produces a tint of gray. Adding black to red creates a shade. Adding gray to wine creates a shade. Adding gray to purple creates a shade. Adding gray to blue creates a shade. Adding gray to green creates a shade.

Visible light makes up a small part of the electromagnetic spectrum. It’s the only part you can see. Visible light consists of the colors you see in a rainbow—red, orange, yellow, green, blue, and violet. These colors form the basis for the color wheel interior designers use for creating color schemes.

The spectrum also includes other forms of energy you encounter every day: infrared, radio waves, microwaves, X-rays, gamma rays, and ultraviolet rays. Many consumer electronics products utilize the electromagnetic spectrum. Can you identify a few of them?

Visible Light and the Electromagnetic Spectrum

Light is a form of energy called electromagnetic radiation. It travels through space as oscillating waves. From crest to trough, these waves range in size from large as a building to small as a microscopic particle. Wavelength is the distance between the crests of two adjoining waves. Frequency is the rate at which a wave oscillates or fluctuates and is measured in hertz. The chart shows the electromagnetic spectrum arranged according to wavelength and frequency in hertz. As the length of a wave increases, its frequency decreases.

The inside story...
The arrangement in a color wheel provides a basis for all color relationships.

Figure 11-5 pictures a value scale. The left column shows the range of tints obtained by adding greater amounts of white to the blue color. The right column shows the range of shades obtained by adding greater amounts of black to the blue.

**Intensity**

**Intensity** refers to the brightness or dullness of a hue. The middle ring of the color wheel shows the normal intensity of each hue.

One way to dull a hue, or lower its intensity, is to add some of its complement. The complement of a hue is the hue opposite it on the color wheel. For instance, blue is the complement of orange. To lower the intensity of orange, you add varying amounts of blue, as shown in 11-6. To lower the intensity of red, you add small amounts of its complement, green. Examples of high-intensity colors include hot pink and fire-engine red. Smoky blue and rust are examples of low-intensity colors. Another way to lower the intensity of a hue is to add gray, making the color a tone.

**Neutrals**

Although neutrals are not really colors, they are usually classified as colors when discussing design. Black, white, and gray are neutrals. Black is the combination of all colors when it exists as a pigment. A pigment is a coloring agent used in paint and printed materials. In contrast to black, white used as a pigment has no color. Gray is a combination of black and white. Brown and its tints and shades are also neutrals. Combining equal amounts of complementary colors forms a brown color.

By adding a neutral color to a hue, the value of the hue changes to either a tint or a shade. This makes the hue less intense. With any of these changes, neutralization of the hue occurs. Neutralized hues blend better with other colors.

**Art Activity**

Use tempera paints to create various intensities of a hue by combining it with its complement.

**Activity**

Use tempera paints to change the intensity of a hue by combining it with a neutral pigment.

**Discuss**

What impact do you think color has on attitudes? Where would you expect to see very intense colors?

**Discuss**

How do you make a color less intense?
Warm and Cool Colors

Colors can be classified as either warm or cool. Although the actual temperature may be the same throughout an entire home, some rooms may seem cooler or warmer due to the usage of certain colors in decorating.

Warm colors include yellow, orange, red, and the colors near them on the color wheel, with red being the warmest. They are called warm colors because they remind us of fire and the sun.

Warm colors are the advancing colors. Warm-colored objects appear closer to you. Warm-colored walls look closer together. For example, a room painted red, yellow, or orange appears smaller than its actual size.

Warm colors attract your attention. They can make you feel happy, energetic, and full of excitement. Research shows the color red actually stimulates the nervous system and can increase blood pressure, heartbeats, and breathing rate. Many advertisements use warm colors to make you notice them. Restaurants use warm colors to increase your appetite. Locker rooms use them to generate excitement. Warm colors in homes make household members feel lively and cheerful. An overdose of warm colors, however, may make people feel nervous or tense, especially if they are full-intensity colors.

Cool colors are opposite the warm colors on the color wheel. These include blue, green, violet, and the colors near them. They are cool colors because they remind people of water, grass, and trees.

Cool colors are receding colors. They make objects seem smaller and walls seem farther away than they really are. Decorating a small room in cool colors can make it appear larger than actuality. Cool colors are quiet and restful. Hospitals often use them to help patients relax and feel calm. They are also popular for bedrooms. With overuse, however, cool colors may make people feel depressed.

Warm and cool colors create different moods that make people feel differently. For example, workers in an office complained their lunchroom was always cold. When the employer changed the light blue room to orange, the complaints stopped even though the temperature never changed.

Color Harmonies

The surest and easiest way to achieve success when using color is to follow one of the standard color harmonies. A color harmony is a pleasing combination of colors based on their respective positions on the color wheel. There are seven basic color harmonies: monochromatic, complementary, split-complementary, double-complementary, analogous, triadic, and neutral. Established color harmonies bring colors together in combinations that are very satisfying to the eyes.

Monochromatic Color Harmony

A monochromatic color harmony is the simplest color harmony. It uses a single hue from the standard color wheel. The hue selected for the monochromatic color harmony in 11-8 is green.

You can achieve variation in a monochromatic color harmony by changing the value and/or intensity of the hue. For example, you could use light blue, gray blue, and navy blue—a tint, a tone, and a shade of the same hue. A paint fan deck will usually show five to seven values of the same hue. To add interest to the color scheme, use accents of neutral colors. Using a monochromatic color harmony can make a room appear larger. It can also unify the furnishings and accessories used in the space. The monochromatic color scheme is the most restful of all, because it has the least contrast or drama.

Discuss
If you wanted a very large room to feel cozier, what would be a good color choice for its walls? Why?

Reflect
Is there a room in your school, home, or some other place you frequent that always makes you feel cold? What color is the room? How could a possible change in color help you feel warmer?

Reflect
Is there a room in your school, home, or some other place you frequent that always makes you feel cold? What color is the room? How could a possible change in color help you feel warmer?

Avoid Greenwashing

Are “green” products always “green”? Some companies and agencies may be less than truthful about the “green” aspects of their products and services. These companies and agencies realize that more consumers are looking for green products and are easily influenced by terms relating to green features. They may use terms that mislead consumers and professionals about the “green” features of their products.

An example of greenwashing involves low- or zero-volatile organic compound (VOC) paints. Because they are less toxic to humans and the environment, these paints are catching on quickly with consumers. Several reliable paint suppliers produce these paints. Other companies are putting “green” on the labels, but their paint may actually be neither low- nor zero-VOCs products.

Before buying any green products, check a number of Web sites that provide information on the validity of products that indicate green features. A few of the Web sites include the following:

www.greenbiz.com
www.edcmag.com
www.greenguard.org

Discuss
Have you ever bought a product advertised as “green,” only to find out that it wasn’t really “green”? If this happened to you now, what would be your response?

Reflect
What color combinations do you wear most often? Why?

Enrich
Attend a presentation by a paint manufacturer’s representative who discusses the importance of selecting colors for interiors. Be prepared to ask questions. Summarize what you learn.

11-8
By comparing these two living rooms, you can sense the warmth created by the use of yellow and red (A) and the feeling of coolness generated by the use of green and blue (B).
Although such a sharp contrast is fine for some rooms, most rooms are more comfortable with less contrast. Varying the values and intensities of the colors can do this along with varying the amounts of the colors, 11-9. The more one color dominates the other, the less noticeable the contrast.

**Split-Complementary Color Harmony**

Using one hue with the two hues adjacent to its complement creates a split-complementary color harmony. For example, if you choose the blue hue first, you would look directly across the color wheel to find orange, its complement. You would then select the colors on both sides of orange to establish your split-complementary color harmony. The resulting color harmony uses blue, yellow-orange, and red-orange, 11-10. With this color selection, blue will likely be the dominant color, while yellow-orange and red-orange provide lively contrast.

**Double-Complementary Color Harmony**

Selecting two colors and their complements from the standard color wheel creates a double-complementary color harmony. In this way, you use four colors to create the color harmony. One example of a double-complementary color harmony results from pairing red and green with violet and yellow, 11-11. As long as each pair is composed of complementary colors, you may use any combination of pairs.

**Analogous Color Harmony**

Selecting related hues from the standard color wheel creates an analogous color harmony. These are hues that are next to each other on the color wheel. In an analogous color harmony, usually three to five hues are used. Since they are related, they blend together well. One color seems to merge into another. Even when the colors in an analogous color harmony are all warm, the room will be more restful than one that uses colors from both sides of the color wheel. Figure 11-12 shows an example of an analogous color harmony.

An analogous color harmony will look best if you choose one color as the dominant color and use smaller amounts of the others to add interest and variety. You may also want to use a tiny amount of an unrelated color as an accent.

**Triadic Color Harmony**

A triadic color harmony uses any three colors that are equally distant from each other on the standard color wheel. The triadic color harmony will follow a pattern of using every fourth color on the color wheel. For example, yellow, blue, and red—the primary colors—form a triadic color harmony, 11-13. The secondary colors—green, orange, and violet—also create a triadic color harmony. The two other possible color combinations are: yellow-orange, red-violet, and blue-green; or red-orange, blue-violet, and yellow-green. Designers use great care and skill to achieve pleasing triadic harmonies. Changing values and intensities can lessen the sharp contrasts.

**Discuss**

What could be done in the room in Figure 11-8 to create a complementary color harmony?

**Reflect**

Is a monochromatic color harmony pleasing to you? If you were choosing a monochromatic color harmony for a room, on what hue would you base it?

**Activity**

Create a brochure showing all of the color harmonies by using magazine pictures or fabric swatches as examples.
Neutral Color Harmony

Although black and white are not hues on the standard color wheel, they are the basis for neutral color harmonies. Combinations of black, white, and gray create neutral color harmonies. Brown, tan, and beige can also be used. Sometimes adding small amounts of other colors to neutral color schemes gives the room more interest, 11-14.

Using Color Harmonies

Now that you have learned about color and the color harmonies, you can begin to use this information to create interior design color schemes for a home. A color scheme is the combination of colors selected for the design.
of a room or house. When designing a room, choose colors that you like seeing together. The chosen colors probably look good together because they conform to an established color harmony.

A well-planned color scheme will use color harmonies to blend and unify the design of the home as you transition from one room to another. It will also "...you can create a color scheme that will enhance the near environment and increase the enjoyment of a home, 11-15.

Choosing the Right Colors

The color harmonies you choose for the color scheme of a home depend on several factors. They include what mood or style a person wants, the lifestyle of the family members, the function or the way the occupants will use the room, the items in the room, and the room’s location.

Moods and Styles

You can create a variety of moods in a room through the use of color. For example, you may want a room to feel restful, or you may want it to appear exciting. Choosing cool colors that have similar values will create a restful mood in the room, such as in 11-14. Choosing warm colors with contrasting values will make the room feel exciting.

You can also choose colors that will create a certain style in a room. Different styles, such as southwestern or country, often suggest the use of specific colors. You can use these colors in different color harmonies to achieve the style you want.

In a southwestern-style room, for example, you may choose warm desert colors, such as rust, sunset orange, brick, and sand. In a country-style room, you may choose low-intensity shades of reds, blues, oranges, and yellows.

Lifestyles

Some people have active lifestyles while others lead quieter lives. The colors you choose depend on the lifestyles of household members. For instance, with small children, give consideration to darker colors and shades that do not show dirt easily. In contrast, a householder of adults may choose lighter colors for the walls and upholstery because upkeep is less of a concern.

The colors you choose for each room also depend upon how they are used. Primary and secondary colors of normal intensity are fine for a child’s room, such as in 11-17. If you use the same hues in an adult’s bedroom, however, softer tints or tones at lower intensity levels are preferable.

11-14 Combinations of black, gray, and white create neutral color schemes. Small splashes of accent colors can add interest.

Reflect

Think about your family lifestyle. How does it affect the colors used in your home? How do younger siblings or older grandparents impact color choices?

11-15 Colors found in nature were the inspiration for the earthy color scheme in this bedroom.

Choose the Right Colors

The color harmonies you choose for the color scheme of a home depend on several factors. They include what mood or style a person wants, the lifestyle of the family members, the function or the way the occupants will use the room, the items in the room, and the room’s location.

Moods and Styles

You can create a variety of moods in a room through the use of color. For example, you may want a room to feel restful, or you may want it to appear exciting. Choosing cool colors that have similar values will create a restful mood in the room, such as in 11-14. Choosing warm colors with contrasting values will make the room feel exciting.

You can also choose colors that will create a certain style in a room. Different styles, such as southwestern or country, often suggest the use of specific colors. You can use these colors in different color harmonies to achieve the style you want.

In a southwestern-style room, for example, you may choose warm desert colors, such as rust, sunset orange, brick, and sand. In a country-style room, you may choose low-intensity shades of reds, blues, oranges, and yellows.

Lifestyles

Some people have active lifestyles while others lead quieter lives. The colors you choose depend on the lifestyles of household members. For instance, with small children, give consideration to darker colors and shades that do not show dirt easily. In contrast, a household of adults may choose lighter colors for the walls and upholstery because upkeep is less of a concern.

The colors you choose for each room also depend upon how they are used. Primary and secondary colors of normal intensity are fine for a child’s room, such as in 11-17. If you use the same hues in an adult’s bedroom, however, softer tints or tones at lower intensity levels are preferable.

11-14 Combinations of black, gray, and white create neutral color schemes. Small splashes of accent colors can add interest.

Reflect

Think about your family lifestyle. How does it affect the colors used in your home? How do younger siblings or older grandparents impact color choices?

11-15 Colors found in nature were the inspiration for the earthy color scheme in this bedroom.
A neutral base color and harmony in this room provide a backdrop for the existing art collection.

Reflect
What direction does your room face at home? Do warm or cool colors predominate? What color would you prefer for your room?

Discuss
Determine the type of lighting present in your classroom after studying the chart in Figure 11-19. How does the lighting impact the room colors?

Enrich
Visit a library to review books on using color in interior design. Do any recommend a color selection process other than using the system of color harmonies? Report your findings.

11-19 Colors change when viewed under different types of artificial light.

<table>
<thead>
<tr>
<th>Type of Artificial Lighting</th>
<th>Color and Artificial Lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Incandescent</td>
<td>Yellow: Warms, Strengthens, Enriches</td>
</tr>
<tr>
<td></td>
<td>Orange: Dulls, Darkens</td>
</tr>
<tr>
<td>Tungsten-Halogen Incandescent</td>
<td>Yellow: Warms, Strengthens, Enriches, Dulls slightly</td>
</tr>
<tr>
<td></td>
<td>Orange: Dulls slightly, Darkens slightly</td>
</tr>
<tr>
<td>Deluxe Cool-White Fluorescent</td>
<td>Yellow: Enriches, Close to true hue, Warms</td>
</tr>
<tr>
<td></td>
<td>Orange: Enriches, Brightens</td>
</tr>
<tr>
<td>Deluxe Warm-White Fluorescent</td>
<td>Yellow: Enriches, Darkens and enriches</td>
</tr>
<tr>
<td></td>
<td>Orange: Enriches, Brightens</td>
</tr>
<tr>
<td>Cool-White, Bright-White CFL</td>
<td>Yellow: Enriches, Close to true hue</td>
</tr>
<tr>
<td></td>
<td>Orange: Warm, Enriches, Brightens</td>
</tr>
<tr>
<td>Warm-White, Soft-White CFL</td>
<td>Yellow: Warms, Strengthens, Dulls</td>
</tr>
<tr>
<td></td>
<td>Orange: Dulls, Darkens</td>
</tr>
</tbody>
</table>

11-18 A neutral base color and harmony in this room provide a backdrop for the existing art collection.

Using the newer and more energy efficient lighting such as compact fluorescent lighting (CFL), light-emitting diodes (LED), and fiber optic lighting, incandescent lighting can bring dullness to some colors and fluorescent lighting can completely distort color. Incandescent lighting generally makes colors appear warmer. Fluorescent lighting makes colors appear warmer or cooler depending on the color of the lightbulb or tube. In general, most fluorescent lighting will make colors appear cooler compared to incandescent lighting. Halogen lighting renders the truest presentation of colors.

Compact fluorescent lighting affects colors in various ways depending on the color rating of the bulb. The chart, 31-19, shows the impact of various lighting types on colors. You will learn more about types of lighting in Chapter 17.

Location of the Room

The direction the room faces—north, south, east, or west—must be taken into consideration when choosing the base color and color harmony. If a bedroom is located on the north side of a house, the subdued light of the northern exposure may make colors appear cooler. To make the room appear warmer, choose a color harmony that uses warm colors. A southern exposure receives the most sunlight and generally makes colors appear bright and warm. Sometimes cool colors are preferred for rooms with southern exposures, 11-20.

You cannot assume, however, the quality of light entering a room from a specific direction is always the same. The light entering a bedroom with a northern exposure will change significantly, for example, if it reflects off a bright white house next door. Also, a room with a southern exposure will not be sunny if a covered porch or overhangs the windows and doors. Even the light that filters through trees outside a window can change the quality of sunlight entering the room. Consequently, the best rule of thumb is to view a color sample in the actual room at different times of day and night to examine all lighting factors.

When considering location, you also need to think about the colors used in adjoining rooms. The new colors you choose should blend with those used in adjoining rooms. In general, color should not change abruptly from room to room. Instead it should make a gradual transition from one space to another.

If the location of a dining room is next to the living room, you can use the same base color in both rooms. You might use an analogous color harmony with yellow as the base color of the color scheme in both rooms. In the living room, consider selecting yellow as the dominant color with the other analogous hues playing secondary roles. Then use the same analogous color harmony in the dining room but expand the harmony from three to five hues and add interest by changing the tints or shades of the hues selected. You might also choose to have yellow play a less-dominant role in the dining room than it did in the living room. Introducing a color in the split-complementary color harmony with yellow as an accent will add excitement to the room. Since yellow is the base color of all the harmonies in both rooms, it provides a smooth transition.

There is an exception to the rule of blending colors in adjoining rooms. In homes using contemporary design, the walls of adjoining rooms may intentionally have different, bold colors. Devote special care, however, to applying the basic rules of color harmonies so the abrupt transitions result in good design.

Using Color Correctly

As you work with color, the following guidelines will help you use color well:

- Applying colors to large areas makes them appear to gain intensity.
- Reflective surfaces impact the colors used in a room.
- The direction the room faces—north, south, east, or west—must be taken into consideration.

Vocabulary
Describe what a smooth transition means in reference to the color schemes of adjoining rooms.

Discuss
Have you been in public buildings that use abrupt color changes to send a special message or convey a certain feeling? Name some examples and give your opinions for the use of abrupt color changes.
11-21. While you may want to avoid a totally neutral room, remember too many strong contrasts in a room can be confusing and tiring.

- Color harmonies are easier on the eye when one color, the base color, dominates. The dominant color should cover about two-thirds of the room area. When you use equal amounts of two or more colors in a room, your color selections can become a distraction and appear cluttered as each color competes for attention.

- When choosing colors for large areas, such as walls and floors, select low-intensity colors. If you use high-intensity colors, they can become overpowering. Instead, use high-intensity colors in small amounts as accent colors in accessories or small pieces of furniture.

- Heavily textured surfaces make colors appear dark. This is because the light strikes the surface at different angles, making the item appear to have greater depth, 11-22. When trying to match fabrics, it is important to have samples of the fabrics you are matching. For example, if you are matching drapery fabric to carpet, make sure you have samples of the carpet with you.

- If a room is very large, consider choosing colors that will make it look smaller. Shades, high-intensity colors, and warm hues that have advancing qualities make a room appear smaller.

- If a room is small, color can make the room appear larger. Tints, low-intensity colors, a monochromatic or analogous color scheme, or cool hues that have receding qualities make a room look larger.

Choosing the right colors, creating color harmonies, and following the color guidelines is important, 11-23. This will help you make color work well for you, your home, or your customer.
Summary

Color is one of the most important elements of design. It can create and communicate different moods. Color has its own physiological and psychological effects on people. The basis of all color relationships is the color wheel. Colors in the middle ring of the color wheel are primary, secondary, or intermediate colors. Color has three characteristics—hue, value, and intensity. The cool colors are located on one side of the wheel, and the warm colors are on the other.

When colors are used together in a pleasing manner, color harmonies are created. They may be monochromatic, complementary, split-complementary, double-complementary, analogous, triadic, or neutral. Neutral colors are black, white, gray, tan, beige, and brown.

When choosing a color harmony for a personal color scheme, first choose the right colors for a home and the lifestyle of the occupants. Then follow certain guidelines will coordinate the colors you select into good design.

Review the Facts

1. What factors influence the psychological impact color has on people?
2. Summarize the feelings each of the following colors evokes in people: red, green, and violet.
3. Name the secondary colors. What primary colors, in what proportions, are used to make each?
4. Which color name is listed first in the name of a tertiary color?
5. Contrast value and intensity of color.
6. What are the differences between a tint, shade, and tone?
7. Summarize how to neutralize a hue.
8. Name two warm colors and two cool colors.
9. Identify an example of each of the seven color harmonies.
10. What factors influence the way color harmonies are used in planning an interior design?
11. Summarize the guidelines for using color correctly in a room design.

Think Critically

12. Draw conclusions. No two people perceive color in exactly the same way and indeed some people are unable to distinguish between certain colors at all. How could these behaviors pose an obstacle to an interior designer’s presentation to a committee in charge of finalizing selections for new corporate offices? Draw conclusions about what techniques the designer could use to overcome objections.
13. Identify alternatives. Assume you are working with two clients who want to redesign the master bedroom in their home. The room has a northern exposure with little natural lighting. One client prefers warm, intense hues while the other prefers cool hues. In addition to sleeping, your clients also use the room for reading. What color alternatives would you suggest that both clients will find pleasing? How can lighting impact your color choices?

Answer Key

1. age, gender, culture, and life experiences
3. orange—equal amounts of yellow and red; green—equal amounts of yellow and blue; violet—equal amounts of red and blue
4. primary color
5. Value is the lightness or darkness. Intensity is the brightness or dullness.
6. Adding white to a hue makes it lighter, which produces a tint. Adding black makes the value darker, which produces a shade. Adding gray softens the value, which produces a tone.
Community Links

14. **Model home tour.** Visit a model home and observe the use of color. Record your observations. Did the colors match your preferences? Did the colors reflect current trends? How were colors used to create mood in various rooms? Identify several psychological impacts the colors may have on some people. Summarize your findings in a brief report to the class.

15. **Analyze color.** Analyze the color scheme of your bedroom or other room in your home, or in the home of someone you know. Which of the colors used is your favorite? How long has this room had this appearance? What color scheme was used before? If you could redecorate next week, what colors would you select? What do you think your color preferences reveal about your personality? Take one or more pictures of this room with a digital camera to place in an electronic presentation. Include examples and colors you might want to use in the future. Share your electronic presentation with the class.

16. **Color comparison.** Locate a home or business in the community whose exterior has a pleasing combination of colors. Identify the colors used and how they were used. Also, identify a building’s exterior that represents the opposite of pleasing to you. What colors are used? Which colors would you change if you had the job of updating the look of the building on a budget?

Academic Connections

17. **Social studies.** Search the Internet for current color trends in residential design. What cultural influences, elements of nature, or other factors inspire the new color trends? How strongly does culture influence color? Which of the new color trends do you find most appealing? Share your findings during a small group discussion.

18. **Science.** Use Internet or print resources to investigate how light reflectance value (LRV) can influence an interior designer’s choice of colors for a room design. How might LRV influence the aesthetics and function of a room design? Write a summary of your findings to share with the class.

Technology Applications

19. **Analyze color harmonies.** Use a digital camera to take pictures of 10 rooms that display good interior design. (Perhaps some are in your home or in historical homes that you have visited.) For each room, identify the type of color harmony that predominates. Also, analyze possible reasons for the color harmonies selected, given the purpose of each room. Using presentation software, combine your photographs and explanations to share with the class.

20. **Computer design project.** Using CADD or another popular interior-design software program, create two small rooms of the same dimensions. Cover the walls of one room with light, dull, cool colors. Cover the walls of the other room with dark, bright, warm colors. Analyze which room looks larger and which looks smaller. Why? Print a copy of the room colors for each room. Write a brief report summarizing your analysis.

Design Practice

21. **Color consulting.** Imagine you are a professional color consultant who has been hired to help select the room colors for a new community center in your neighborhood. Based on your knowledge of the psychological effect color has on people, what colors would you use in each of the following spaces? Why?
   - children’s recreation room
   - reading room for older adults
   - hospitality room with a snack bar
   - small nature museum room
   - drama room for theatrical rehearsals

22. **Portfolio.** Continue the storyboard for the elements of design you started in Chapter 10. Add color as a design element and provide samples of all color harmonies, labeling the colors used. Keep a copy of your storyboard in your portfolio.

Leading the Way with Color

Do you find the psychology of color fascinating? Are you interested in the impact of color on overall room design? If you are, consider joining forces with a community organization, such as Rebuilding Together®. Such groups repair and modify homes for people with limited incomes, including older adults, people with disabilities, and veterans. For an FCCLA Community Service project, consult a leader in the organization about working with one or more clients to create a functional and aesthetically pleasing color palette for a room or entire home.

Use the FCCLA Planning Process and the Community Service Project Sheet to plan, carry out, and evaluate your project. See your adviser for information as needed.