

Elements of Design

Unit: The Art of Design

Problem Area: Elements and Principles of Design

Lesson: Elements of Design

- **Student Learning Objectives.** Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe lines and their influence on design.**
- 2 Analyze shape, value, color, space, and texture in a design.**

- **Resources.** The following resources may be useful in teaching this lesson:

Illusion Optical.com. Accessed Aug. 4, 2012. <http://www.illusion-optical.com>.

“Introduction to the Elements of Design and Line,” *Utah Education Network*. Accessed Aug. 4, 2012. <http://www.uen.org/Lessonplan/preview.cgi?LPid=14241>.

Lewis, Evelyn L., and Carolyn S. Turner. *Housing and Interior Design*, 10th ed. Goodheart-Willcox, 2012.

Sherwood, Ruth F. *Homes & Interiors: Careers in Housing & Interior Design*. Glencoe/McGraw-Hill, 2007.

Wolfe, Mary. *Fashion Marketing & Merchandising*, 3rd ed. Goodheart-Willcox, 2009.



■ **Equipment, Tools, Supplies, and Facilities**

- ✓ Overhead or PowerPoint projector
- ✓ Visual(s) from accompanying master(s)
- ✓ Copies of sample test, lab sheet(s), and/or other items designed for duplication
- ✓ Materials listed on duplicated items
- ✓ Computers with printers and Internet access
- ✓ Classroom resource and reference materials

■ **Key Terms.** The following terms are presented in this lesson (shown in bold italics):

- color
- curved lines
- diagonal lines
- elements of design
- gradations
- horizontal lines
- line
- mass
- shape
- space
- tactile texture
- texture
- value
- vertical lines
- visual texture

■ **Interest Approach.** Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situations. A possible approach is included here.

Show students several examples of optical illusions on a PowerPoint slide show (one that you design yourself) or by accessing free optical illusions at <http://www.illusion-optical.com/>. If you use the website, show the class the following illusions related to design: “Color Dithering,” “Moving Red Dots,” “Dizzily Beautiful Flowers,” and “The Sort of Optical Illusion That Grows on You.” Use VM–A and VM–B while discussing the reasons for the optical illusions and how the illusions relate to textiles and design.

CONTENT SUMMARY AND TEACHING STRATEGIES

Objective 1: Describe lines and their influence on design.

Anticipated Problem: What types of lines are commonly used in design projects? How do lines influence design?

I. Lines and designs

- A. Lines are one of the **elements of design**—the language of the visual arts. The elements of design are the following:
1. Line
 2. Shape
 3. Value
 4. Color
 5. Space
 6. Texture (actual or simulated)
- B. Lines are the most basic design element and provide direction. A **line** is something that is created when two dots are connected. A line is the path the designer intends for a person's eye to move along when looking at fashion or interior design. Design lines may be curved, diagonal, horizontal, and vertical. Each type creates different effects: calmness, excitement, height, etc. Thin lines appear fragile and delicate; they convey elegance. Thick lines appear difficult to break and suggest strength. Thick lines emphasize nearby elements and are bold.
1. **Curved lines** are lines that are softer than straight lines, with smooth bends. The smooth bends are often referred to as a gentle sweep or turn; often they are part of a circle or an oval.
 - a. Curved lines are used to create a sense of flow and are more “unpredictable” than straight lines.
 - b. They express a fluid movement.
 - c. Curved lines have a calming effect or can be very dynamic if the designer uses deep curves.
 - d. A slight curve is less active and generates a calmer feeling.
 - e. Curved lines generate feelings of uniformity and eternity.
 2. **Diagonal lines** are lines that are slanted and appear unbalanced. They angle between horizontal and vertical planes.
 - a. Diagonal lines are used to transition eye movement from one area to another.
 - b. Diagonal lines create a sense of tension, movement, and excitement.

- c. In fashion, diagonal lines tend to make people look larger or more impressive. In interior design, diagonal lines create a dramatic effect.
- 3. **Horizontal lines** are lines that are parallel to the horizon. They accentuate the width of the design and appear stable and secure.
 - a. Horizontal lines convey rest, calmness, and peace.
 - b. They are grounded to the earth and suggest an absence of conflict.
 - c. The horizon is an example of a horizontal line associated with restfulness. When people sleep, their bodies are typically horizontal. Therefore, a designer's use of many horizontal lines in a home would create a calm feeling.
- 4. **Vertical lines** are lines that are perpendicular to the horizon.
 - a. Vertical lines cause the eye to move up and down and suggest height, strength, and dignity.
 - b. They also suggest potential energy and appear strong and rigid.
 - c. Some designers use vertical lines to accentuate the height of a room or window treatment. The height often implies dignity and a connection to heaven, thus a religious feeling.
 - d. In fashion designs, vertical lines make a person appear taller.
 - e. In interior designs, vertical lines are observed as elements of the interior (e.g., tall windows, doors, or window treatments that extend above the top of the window). Tall furniture pieces (e.g., bookcases) have the same effect.

Teaching Strategy: Use VM–C through VM–F to illustrate the basic lines used in fashion and interior design.

Objective 2: Analyze shape, value, color, space, and texture in a design.

Anticipated Problem: How are shape, value, color, space, and texture used in a design?

II. Shape, value, color, space, and texture

- A. **Shape** is the physical form of an object. It is the outline of the object and contains volume and mass. Shape has an enormous impact psychologically, especially when a person enters a room for the first time. The height, width, and depth of the room's objects are all a part of its shape. Form follows function, so a designer first needs to figure out how to use items and then must decide the best form or shape for those items. Similar forms tend to be more pleasing to the eye than unrelated forms. Too many unrelated forms make eyes work harder, so gradual changes in form are preferred. There are four types of shapes or forms:

1. Geometric (organic) form is the use of circles, spheres, squares, rectangles, cones, and triangles to create shapes. It is considered orderly and planned because it maintains those shapes.
 - a. Geometric shapes are visible in round lampshades, triangular pillows, square tables or tiles, and in rectangular nightstands and end tables.
 - b. Frank Lloyd Wright is considered an architect whose compositions utilized geometric forms.
 - c. The use of more organic geometric forms is more irregular, more naturally occurring, and often asymmetrical. For example, the use of smooth, rounded rocks in a transparent vase or free-form squares and triangles in fabric are organic in form.
 2. Realistic form is the truthful representation and treatment of materials. For instance, when an item is recognized for what it is, it is realistic. If it looks like a table because of its specific form and shape and is easily recognized as a table, then it is considered realistic.
 3. Abstract form rearranges a recognizable object, so it may have traits that look real but have been altered. Abstract forms are usually considered contemporary. In other words, nonrepresentational lines, colors, shapes, and forms replace an accurate depiction of an object. The forms are often described as stylized or blurred.
 4. Free forms are considered random, flowing, spontaneous, and curvilinear. They communicate a sense of freedom. Nature is a good example of free form images. In textiles and design, however, free form may represent an object or pattern that is unfamiliar and nontraditional. Modern and Mid-Century furniture and fashions are good examples of free forms.
- B. **Value** is the relative lightness or darkness (contrast) of a hue (pure spectrum of the colors red, orange, yellow, blue, green, and violet), design element, or neutral (varying from whiter to blacker). Value can be used for emphasis or to create a focal point for the design. For example, a light fixture on a dark wall or a bright banding on a white blouse or shirt becomes the focus. **Gradations** (gradual changes; progressions) of value are used to create the illusion of depth; gradations can create a 3D effect.
1. Line, color, texture, and shape all need value contrast to be seen.
 2. Dark areas (values) imply mystery and drama.
 3. Light areas (values) imply happiness, fun, and warmth.
- C. **Color** is all possible combinations of red, orange, yellow, green, blue, violet, black, and white. Color is one of the most important design elements and has tremendously expressive qualities in textiles and design. Color is often described in terms of hue, lightness, and saturation. Color symbolism helps designers represent various traditional, cultural, and/or religious ideas as well as concepts, feelings, and physical reactions. Selecting a color based on symbolism applies to all areas of textiles and design.

1. Red suggests power, heat, aggression, and stimulation. It evokes emotion, passion, alarm (blood), danger, and thoughts of war. Red conveys happiness and good luck in some cultures and emergency in others.
 2. Orange suggests vibrancy as well as autumn (fall leaves and pumpkins). It evokes energy and sunshine while conveying good health and stimulation.
 3. Yellow suggests sunshine, cheerfulness, and attention. It evokes warmth, happiness, and joy. It conveys hazards (warning signs and emergency vehicles), caution, and courage. Sometimes it is associated with peace. It may convey cowardice (e.g., “yellow belly”).
 4. Green suggests life, nature, and environmentally friendly. It evokes feelings of growth, renewal, and health. It conveys rest, lushness, and coolness. Yet it may convey jealousy (e.g., “green-eyed monster”).
 5. Blue suggests nature (e.g., sky and water) and calmness. It evokes feelings of steadfastness and strength. It conveys peace, confidence, intelligence, and stability.
 6. Violet or purple suggests royalty, mystery, spirituality, and military decoration (e.g., “purple heart”). It evokes nature (e.g., orchids, lilacs, violets, and lavender) and has a warm and a cool property, depending on the way in which it is blended. It conveys imagination, creativity, moodiness, and mourning.
 7. Black (absence of color) suggests conservativeness, seriousness, and conventionalism. It evokes mystery and sophistication. It conveys mourning, rebellion, and badness (e.g., “bad guys wear black”). Yet it is visually slimming.
 8. White suggests purity, cleanliness, innocence, and neutrality. It evokes brilliance, mourning and celebration (depending on the culture), health (doctor and nurse uniforms), and angelic nature. It conveys softness and goodness (e.g., “good guys wear white”).
- D. **Space** is the area around a form (e.g., the area around a chair). It could be an area inside a room. When considering space within a room, a designer usually considers two factors: the size of the space and how it will be arranged. Space can be positive (white) or negative (black), open or closed, shallow or deep, and 2D or 3D. As noted earlier, space can be the development of an illusion. For example, two black panels running down each side of a dress with a contrasting panel in the front and back can make a person appear slimmer than a dress made from one color.
1. Large spaces usually make people feel they have freedom. In contrast, a large and empty space can make people can feel lost and lonely. Dividing a large area into various settings (e.g., through the use of rugs, furniture groupings, and with bookcases or low credenza dividers) makes the space more intimate.
 2. Small spaces can feel cramped, as if a person has no room to move. When a small space houses too much furniture, it can feel cramped. On the other hand, if a small space is well arranged for its size, it can make a person feel cozy rather than cramped.

- E. **Texture** is the visual or tactile surface characteristic of a piece. It is the way an item or surface feels when touched or the way it appears it would feel if touched. It requires balance.
1. Monotony occurs when too many like textures are used.
 2. Texture enlivens the visual presentation.
 3. Too many textures can be distracting.
 - a. **Tactile texture** is the way a surface feels when touched. For instance, velvet feels soft when touched. In contrast, a brick wall may feel cool and rough. Interior decorators take into consideration how rough or soft a carpet would feel if people were on the floor. Tactile textures often reflect light differently. As a result, when creating color schemes, designers may need to experiment with different textures to make color schemes appear as planned.
 - b. **Visual texture** is the appearance of an item and how the viewer perceives it. In reality, the item may not feel like it looks. Fabric patterns and weaves—paisley, houndstooth check, plaid, bouclé, linen weave, and silk—create different visual textures with all the different colors, patterns, and depths. Two examples are:
 - (1) Brick-and stone-printed wallpaper is smooth, not rough.
 - (2) Vinyl floor tiles are also smooth.
- F. **Mass** is size: physical size. All of the elements of design create some form of mass: line, shape, texture, etc. Even the amount of pattern in an object or textile is converted to mass. Mass can be thought of as how empty or crowded a room or area feels.
1. Low mass implies a simple and sparse space or textile. The area is clean and neat. Traditional designs, such as Minimalism and Shaker, are good examples of low mass design.
 2. High mass refers to a space that may “feel” crowded due to textural features, furniture scale, window treatment layers, etc. Formal European interior designs are typically high mass in nature.

Teaching Strategy: Use VM–G to illustrate various ways the design element of value is translated to real life. Use VM–H to review the element of color and the affect of each color. Ask students to answer the questions (on paper) about each color, as shown on VM–H. Use VM–I through VM–N to review and illustrate other design elements. Assign LS–A.

■ **Review/Summary.** Use the student learning objectives to summarize the lesson. Have students explain the content associated with each objective. Student responses can be used in determining which objectives need to be reviewed or taught from a different angle. Questions at the ends of chapters in the textbook may be used in the Review/Summary.

- **Application.** Use the included visual master(s) and lab sheet(s) to apply the information presented in the lesson.
- **Evaluation.** Evaluation should focus on student achievement of the objectives for the lesson. Various techniques can be used, such as student performance on the application activities. A sample written test is provided.
- **Answers to Sample Test:**

Part One: Matching

1. a
2. d
3. f
4. e
5. b
6. c

Part Two: Multiple Choice

1. b
2. a
3. d
4. c
5. b
6. d

Part Three: True/False

1. F
2. T
3. T
4. F
5. F
6. T

Elements of Design

► Part One: Matching

Instructions: Match the term with the correct definition.

- | | |
|----------|------------|
| a. line | d. color |
| b. shape | e. space |
| c. value | f. texture |

- ____ 1. Something that is created when two dots are connected
- ____ 2. All possible combinations of red, orange, yellow, green, blue, violet, black, and white
- ____ 3. The visual or tactile surface characteristic of a piece
- ____ 4. The area around a form
- ____ 5. The physical form of an object
- ____ 6. The relative lightness or darkness of a hue, design element, or a neutral

► Part Two: Multiple Choice

Instructions: Circle the letter of the correct answer.

- 1. The color red symbolizes _____.
 - a. royalty, mystery, and spirituality
 - b. power, heat, aggression, and stimulation
 - c. conservativeness, seriousness, and conventionalism
 - d. vibrancy and autumn



2. Space described as cozy and comfortable is probably _____.
 - a. small
 - b. tall
 - c. large
 - d. narrow
3. The texture a surface appears to have is called _____ texture.
 - a. abstract
 - b. free form
 - c. tactile
 - d. visual
4. Lines that evoke feelings of uniformity and eternity are _____.
 - a. horizontal
 - b. diagonal
 - c. curved
 - d. vertical
5. Which of the following is NOT an element of design?
 - a. color
 - b. function
 - c. line
 - d. value
6. Lines that communicate feelings of height, strength, and dignity are _____.
 - a. curved
 - b. diagonal
 - c. horizontal
 - d. vertical

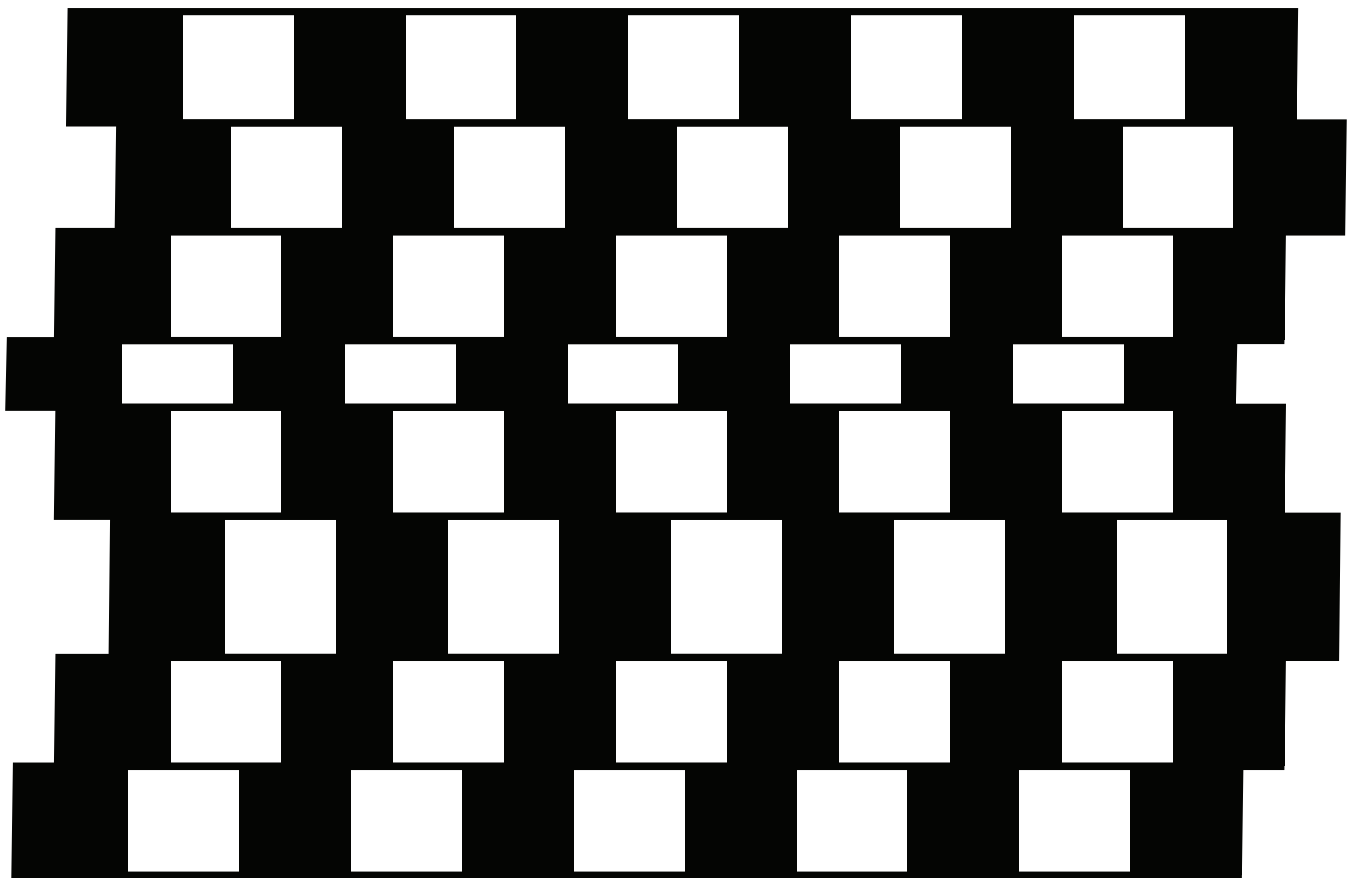
► Part Three: True/False

Instructions: Write *T* for true or *F* for false.

- _____ 1. Tactile texture refers to the way a surface appears.
- _____ 2. High mass refers to a space that may “feel” crowded.
- _____ 3. The elements of design are line, shape, value, color, space, and texture.
- _____ 4. Diagonal lines angle between vertical and curved lines.
- _____ 5. Horizontal lines are perpendicular to the ground.
- _____ 6. Gradations of value are used to create the illusion of depth.

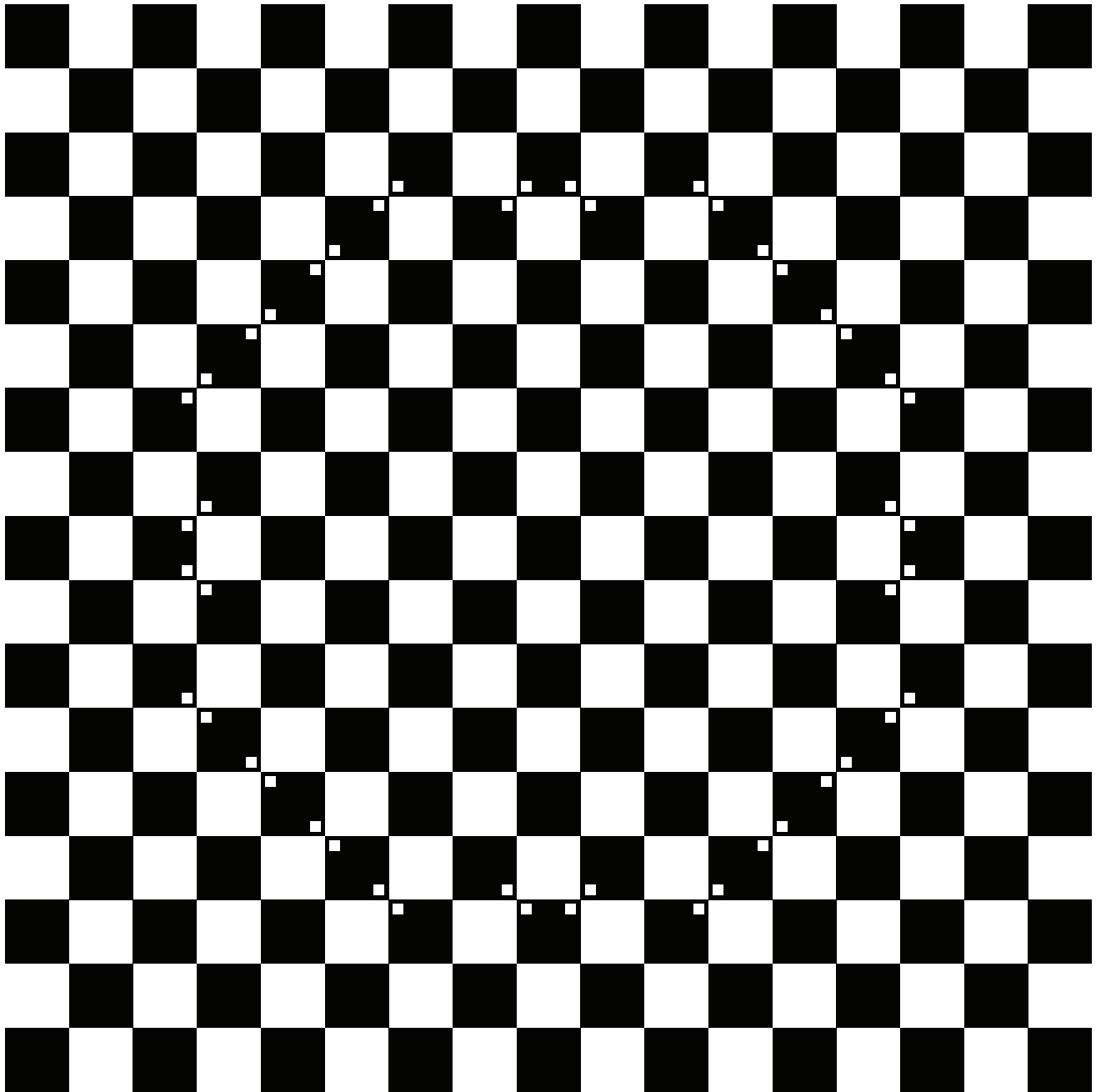
HORIZONTAL LINES AND OPTICAL ILLUSIONS

All the horizontal lines are parallel but appear to be slanted.



SIZE AND OPTICAL ILLUSIONS

All the white and black squares are of equal size. The small white points make the illusion of a ball in the middle.



CURVED LINES

The curved lines of this modern spiral staircase are soft and dramatic.



DIAGONAL LINES

Which tie creates the most movement and excitement?



HORIZONTAL LINES

The strong horizontal lines in this shoe salon provide a calming and relaxing effect.



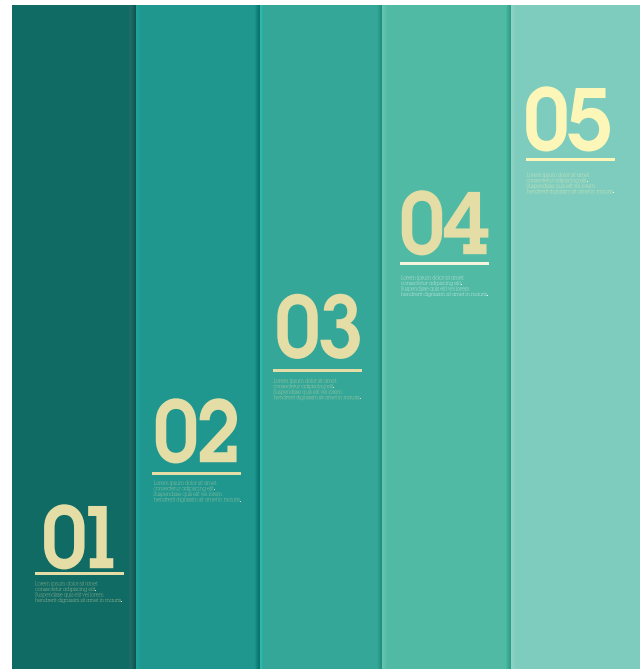
VERTICAL LINES

Vertical lines cause the eyes to move up and down, thereby creating height. This window treatment accentuates the height of the window opening. The repetition of the vertical window frames with the predominantly vertical wall accents makes this room appear light and airy.



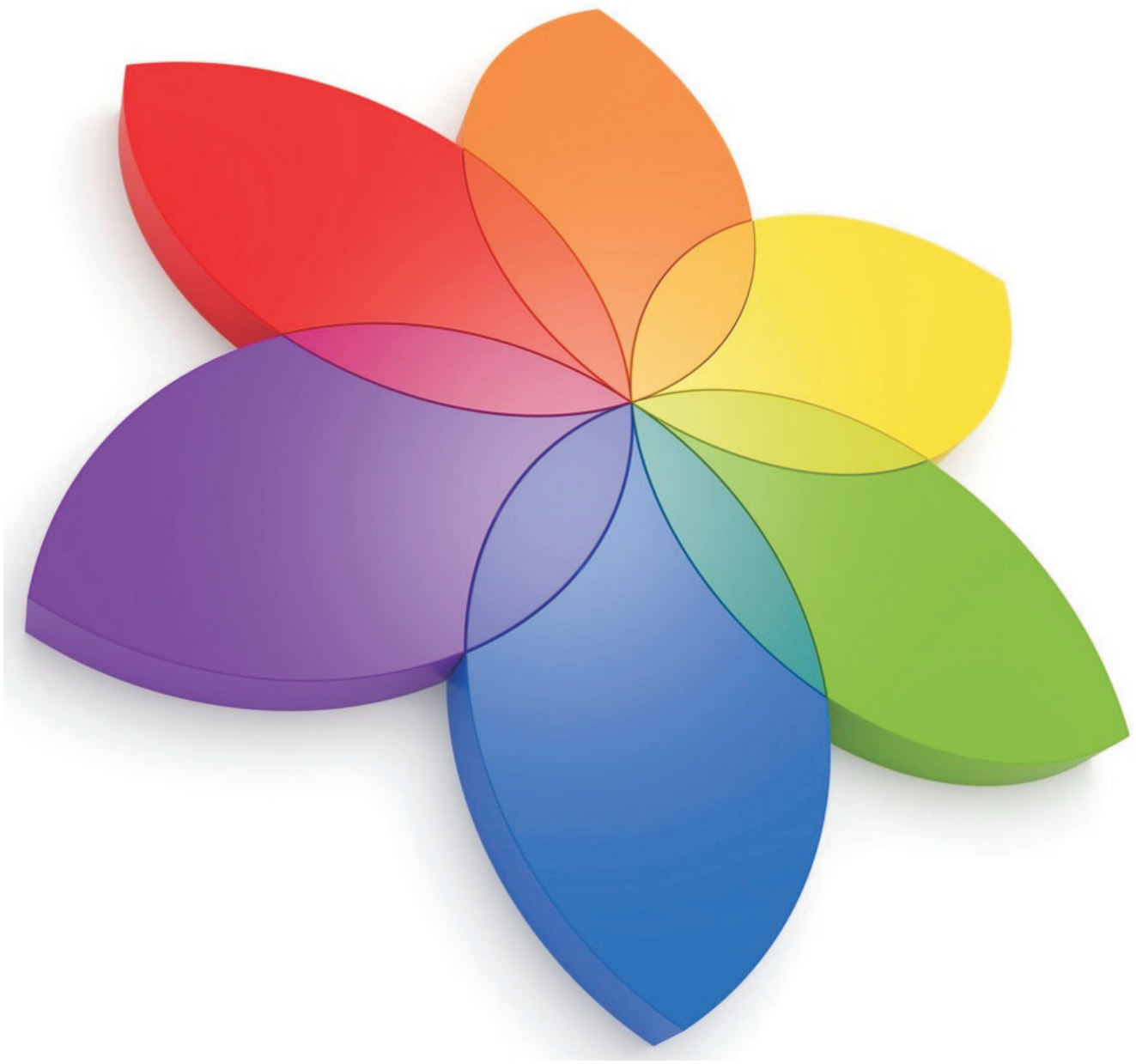
VALUE

This graphic design palette shows the gradations of sea blue colors from dark to light. In the modern living room, value helps our eyes discern shapes, color gradations and shades, textures, and line weights.



COLOR

How does each of the colors make you feel? What does each represent to you? What marketing message does each send? How about black and white?



ABSTRACT FORMS

We recognize a picture of waves and a wall of flowers, but neither of them is real. They are abstract forms.



FREE FORM

Free form implies that the style is random and flowing: similar to this retro room with curvilinear shapes and unconventional furniture.



GEOMETRIC FORM

Geometric shapes—circles, squares, triangles, cones, and rectangles—are a common theme for interiors and fashion. How many geometric forms do you see in this atrium? How many on the 1960s clothing? (Look carefully.)

For more examples, research Frank Lloyd Wright's buildings and Ray Eames's wallpaper and fabric.



SPACES

How do these reception and hotel interiors use space? Describe how each space makes you feel. Which elements of design are shown in each image?



HIGH AND LOW MASS

Which room is an example of high mass design? Which is an example of low mass design?



TEXTURE: TACTILE AND VISUAL

Which image is tactile texture, and which is visual texture?



Elements of Design Project

Purpose

The purpose of this activity is to reinforce your understanding of the elements of design.

Objectives

1. Mount image examples of the elements of design.
2. Label each image example using block lettering.
3. Create one portfolio page for each element of design.

Materials

- ◆ old magazines (e.g., fashion, interior design, manufacturing, and industrial design)
- ◆ fabric samples
- ◆ wallpaper sample books
- ◆ miscellaneous types and colors of 8½- × 11-inch paper (a minimum of 16 sheets per student or pair)
- ◆ glue sticks or glue guns
- ◆ colored paper
- ◆ scissors
- ◆ ruler
- ◆ writing utensil

Procedure

1. Work independently or in pairs to complete this lab sheet.
2. Select 8½- × 11-inch paper, and create a design for your portfolio pages. You will need a minimum of 16 pieces of paper.



3. Choose at least one image or sample to illustrate each element of design listed below. The image may be an interior or exterior and fabric or fashion. Optional: You may wish to illustrate one interior or exterior example and one fashion example for each element of design.
 - a. Line
 - (1) Curved lines
 - (2) Diagonal lines
 - (3) Horizontal lines
 - (4) Vertical lines
 - b. Shape
 - (1) Geometric
 - (2) Realistic
 - (3) Abstract
 - (4) Free form
 - c. Value
 - (1) Lightness
 - (2) Darkness
 - d. Color
 - e. Space
 - f. Texture
 - (1) Tactile
 - (2) Visual
 - g. Mass
 - (1) Low
 - (2) High
4. Neatly cut and mount each picture on 8½ × 11-inch paper, and use block lettering to neatly label the top of the page with the design element it illustrates. Leave space for your description and explanation of each image or sample. Again, each element should have its own page. A sample label would be: LINE: Curved Lines.
5. Description: Explain why you chose each image or sample. Highlight the features that best illustrate the design element shown on each portfolio page.
6. Rubric: Accuracy, neatness, and includes all design elements (with a complete description). Optional: Bind the pages or otherwise assemble the portfolio for presentation.
7. Present your portfolio as directed by your instructor. Participate in a discussion of the various ways in which your classmates selected their examples.
8. Turn in your completed portfolio pages to your instructor.