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# Two-Dimensional Design

## ELEMENTS OF DESIGN

### Learning to See like an Artist

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Learning to see like an artist isn't as easy as it sounds. We live in a visual culture where we're constantly bombarded with images. Television, movies, videos, magazines, billboards, and the like are part of our daily experiences. We spend much of our time looking, watching, or viewing—but we spend very little time seeing. Watching is a passive activity that requires little or nothing from the viewer. Seeing, however, requires an enormous amount of focused concentration.

Let's take an apple as an example. When you look at an apple, your brain tells you, "That's an apple." If you wanted to eat the apple, you might examine it a bit further. You might say, "That's a bruised apple" or "That's a shiny red apple." To eat the apple, that's all you have to know. Your brain tells you what you need to know about an object and then dismisses any further investigation as unimportant.

A basic knowledge about an apple may be enough if you're just going to eat it. However, it's not nearly enough if you plan to draw or paint the apple. You must begin to see the apple—and seeing is a process of discovery. To remain open to the truth of what you observe, you must first unlearn what you already know about a subject. Your prior knowledge about an object (in this case, an apple) keeps you from examining its visual essence—and finding the visual essence of things is the realm of artists.

As an artist, you must look at the apple as though you've never seen an apple before (Figure 1). Take nothing for granted. As you examine this new object, ask yourself all sorts of questions: "Is it truly round, or is it taller than it is wide?"



**FIGURE 1—When you examine a subject you intend to draw or paint, look at it as if you were seeing it for the first time. Don't rely on your previous knowledge of the subject. Instead, look for the ways in which the subject isn't what you expect. Search for surprises within the subject. What do you notice about its size, shape, and texture? What kind of detail strikes you? (See Color Cards.)**

“Is it red, or is it more of a burgundy or a deep violet?” “Is the stem at the top, or is it slightly off center?”

Learning to see the truth is probably the most important step to becoming an artist. Through practice, you can acquire the hand skills you need as an artist. But your hand can't see. No matter how skilled your hand becomes, it needs your eyes—and brain—to tell it what to do.

As an artist, you're going to take information you discover through observation and translate it into lines and shapes and colors. In doing so, you're making an *abstraction*. The verb *abstract* means to remove. When used in reference to art, an abstraction is something that's been removed (or abstracted) from the actual subject. For example, Figure 1 is

an abstraction of an apple. No real apple is present—only the symbol of an apple. All artists create images that are abstractions of an actual object. All art is an abstraction of reality. (Don't confuse *abstraction* with *abstract art*, a particular style of art.)

In order to take objects in the real world and translate them into a flat, two-dimensional surface, you're going to use some basic tools:

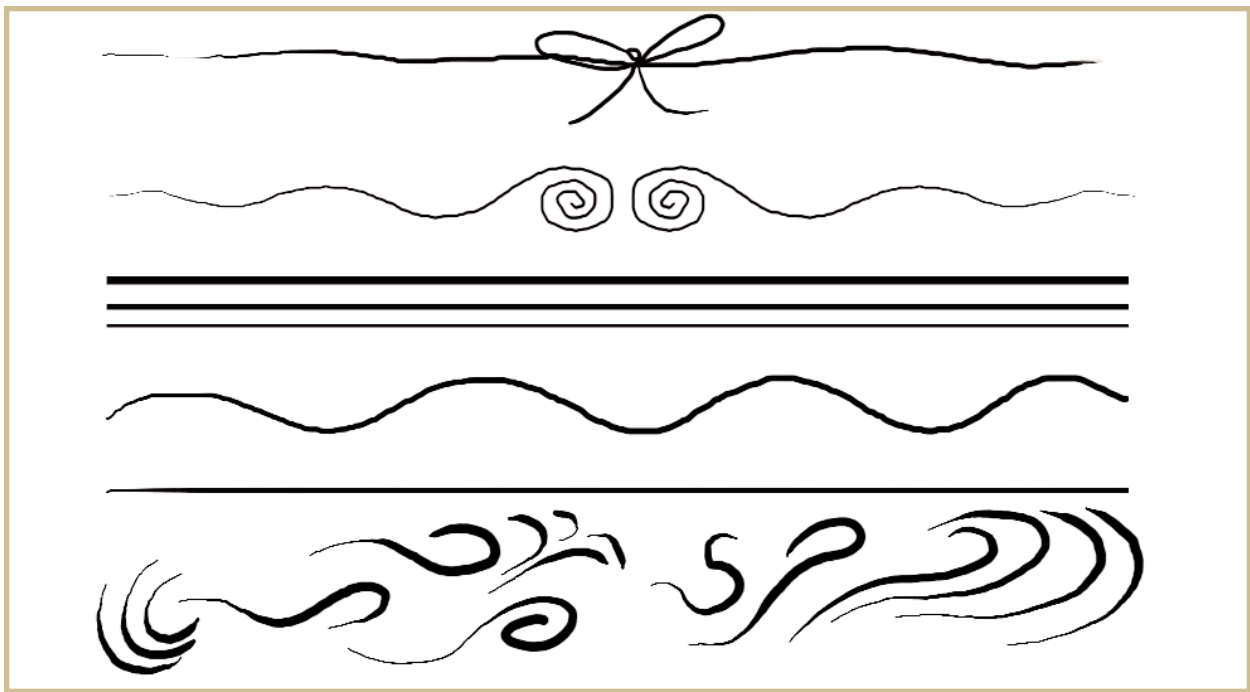
- *Elements of design.* All drawings and paintings are composed of the basic design elements—line, shape, color, texture, and pattern.
- *Principles of design.* The principles of good design aren't rules or goals; they're a means of guiding an artist toward the creation of an aesthetically pleasing work of art—that is, a work of art that's pleasing in appearance. These principles are unity, balance, rhythm, harmony, emphasis, and contrast.
- *Composition.* Composition refers to the arrangements of objects in a piece of art. You can't produce an effective overall drawing if you haphazardly scatter the objects you're depicting across the page. In addition to arrangements, composition depends on the relationships of size, tonal values, and color.

In this study unit, you'll study these three items—elements of design, principles of design, and composition. When you reach the end of this unit, you'll be able to combine all of the information you've learned to produce effective, interesting, and visually dynamic compositions.

## Line

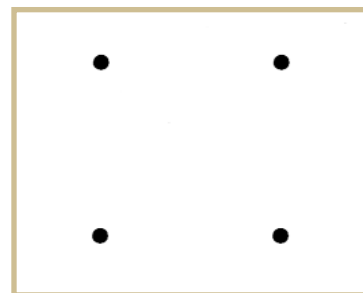
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The simple *line* is a powerful element that's often overlooked. Lines can be used to define edges, create a sense of weight and volume, define space, or even convey a sense of energy and motion. Lines can be straight or curved, thick or thin, formal or playful, continuous or broken (Figure 2). Sometimes lines can even be implied without actually being drawn (Figure 3).



**FIGURE 2—***Lines are surprisingly diverse. They can be heavy or thin, or they may vary in thickness. Look closely at the lines in this illustration. Each has a different “feel.” Imagine how you would use each of them in a composition.*

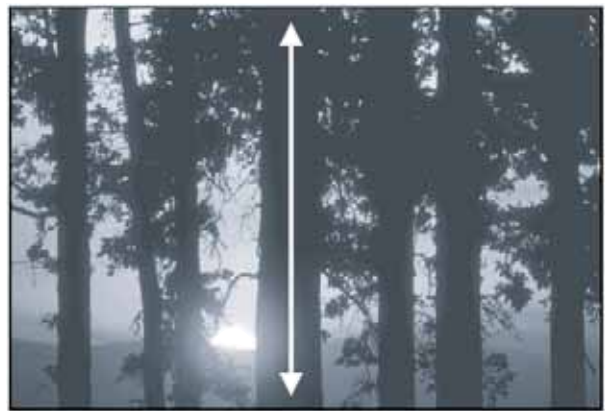
**FIGURE 3—***The arrangement of dots in this illustration creates a square, but the square doesn’t really exist. The viewer’s brain connects the dots, thereby creating invisible or implied lines that form a square.*



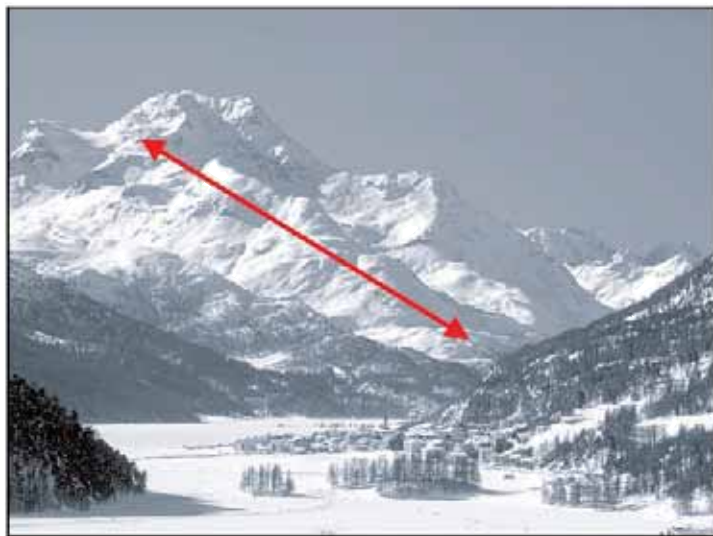
The placement and direction of a line on a two-dimensional surface can lead the eye from one point to another. It can define a shape or an area. A line can even be used to convey an idea or give a sense of energy. For example, a flat horizontal line creates a sense of stability or restfulness. A vertical line might suggest strength and dignity. Diagonal lines, which seem to have a feeling of motion, are more dynamic and energized. Curved lines have a softer, more sensual quality (Figure 4).



(A)  
HORIZONTAL



(B)  
VERTICAL



(C)  
DIAGONAL



(D)  
CURVED

**FIGURE 4—Each of the directional lines in these drawings conveys a different mood, just as directional lines do in nature. (See Color Cards.)**

Directional lines exist in nature and in man-made objects as well. Consider these examples:

- *Flat, horizontal line*—the horizon at the ocean, tabletops, shelves, mattresses, and other flat surfaces
- *Vertical lines*—tall trees and buildings
- *Diagonal lines*—mountains, staircases, and roofs
- *Curved lines*—rolling hills, fruits, animals, and people

If you think about the directional lines you see in nature and how you respond to them, you should begin to see how—and, more importantly, why—you respond to the lines themselves. Then you'll be able to use the lines in your artwork to create the same responses from the people who look at it.

## Shape

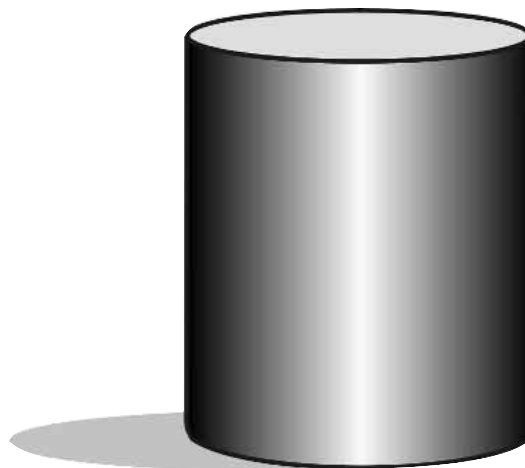
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*Shapes* are enclosed two-dimensional spaces. Shape is closely associated with line because lines are often used to enclose shapes. But shapes can also be defined without lines. For example, a space may be defined with a color or tonal value different from the background. The edges of this shape don't need lines.

The basic outline of a shape may consist of straight lines, curved lines, or a combination of both. Think about some of the familiar geometric forms, like cubes, spheres, and cylinders. To “figure out” how to approach drawing these objects, you might be tempted to analyze the properties of their form. But remember, being able to truly *see* the shape of an object often requires you to forget about what it is and concentrate on what it looks like.

For example, take a cylinder. Because you know its ends are round, you might be tempted to draw the ends as circles. However, if you observe the ends of a cylinder from different angles, you may see the circle is foreshortened so it appears to be an ellipse (Figure 5).

**FIGURE 5**—Because you're looking at this cylinder from an angle, the circular end appears to be an ellipse, not a circle.



Shapes can have a sense of harmony. Shapes are considered to be harmonious if they're composed of lines that are the same or similar. For example, the shapes in a bowl of fruit are harmonious. Even though the shapes of the fruit are somewhat different, harmony

exists because the shapes of the fruit and of the bowl are made of curved lines. A box of fruit, on the other hand, doesn't have the same sense of harmonious shapes because the box has straight edges while the fruit is curved. (Don't worry, this doesn't mean you can't draw a box of fruit. Artists can create a sense of harmony in other ways, as you'll soon see.)

Right now, at the start of your studies, begin to concentrate on your ability to observe shapes. You must be able to find the basic shape of an object, and the shapes within that object, and the shapes within those shapes, and so on—without any regard for what the object *is* and without any preconceived notion as to what it *should* look like. This observational skill is more important than the ability to see color or texture. Seeing pure shape is never easy, however, because it requires you to forget what you're looking at and to see beyond your knowledge to the visual truth.



### ***Back to the Drawing Board 1: Energy and Motion***



Throughout *Two-Dimensional Design*, you'll find "Back to the Drawing Board" exercises that provide you with hands-on experience in applying the key concepts you're learning. You may complete the exercises now, or you may wait until after you've finished the unit.

#### **Tools and Materials**

- Drawing paper
- Graphite pencil
- Scissors
- Sheet of black paper

#### **Objective**

To use a simple shape to create energy and motion in a composition

***(Continued)***

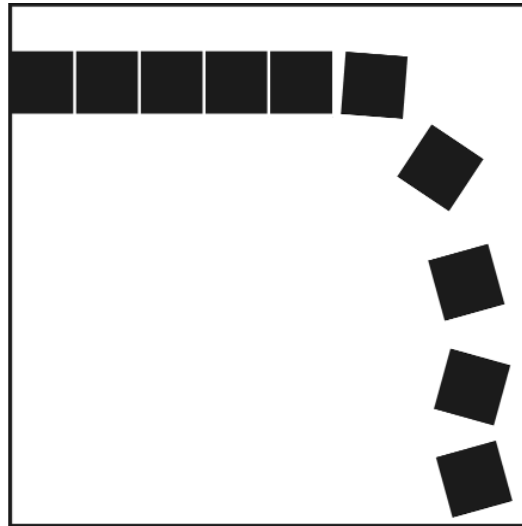


## ***Back to the Drawing Board 1—Continued***

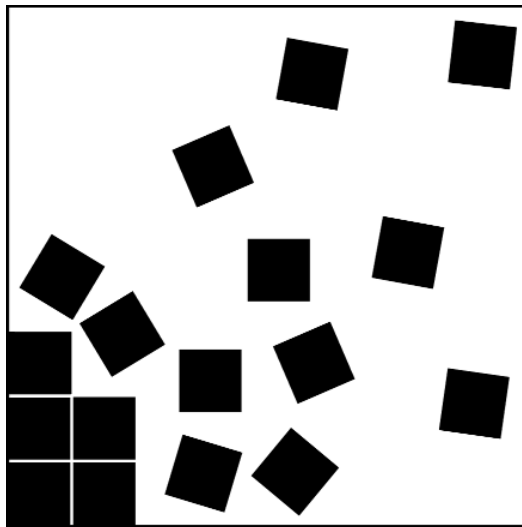
### **Procedure**

1. In the center of your sheet of paper, outline a square 8 in. (inches) by 8 in.
2. From your sheet of black paper, cut out a group of 1-in. squares.
3. Arrange the squares inside your 8-in. outline to create a dynamic composition that suggests energy and motion. Study Figures A and B for ways in which you can produce this idea.

***FIGURE A—The closeness of the squares seems to suggest that they’re moving from left to right and then falling.***



***FIGURE B—In this illustration, the squares seem to be exploding from the bottom corner, or they may be falling down into that corner.***



# Color

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Color is fun. As an element of art, it stimulates both psychological (mental) and physiological (physical) responses in the observer. Warm colors (red, yellow, and orange) tend to create active, exciting responses. Cool colors (blue, purple, and green) tend to create passive and calming responses. Here are some of the emotions and responses associated with the basic colors.

## Warm colors

- Red creates energy, determination, passion, excitement, courage, self-esteem, and mental clarity.
- Yellow stimulates the nerves and mind, resolves conflicts, and contributes to feelings of harmony.
- Orange brightens the emotions, stimulates the nerves, soothes anxiety, and reveals emotions.

## Cool colors

- Blue creates a tranquil feeling, is associated with intuition and trustworthiness, and helps self-acceptance.
- Purple relaxes and soothes fears and encourages acceptance of responsibility.
- Green serves as a pacifier, eases stress, and soothes anger.

*Value*, an important component of color, describes the amount of lightness or darkness a color possesses. When we describe things according to their color (for example, a red dress), we often clarify that description by defining the color:

- He drove a dark blue car.
- I dream of Jeannie with the light brown hair.

Values progress from white (the lightest value) to black (the darkest value). Between these two colors is a wide range of shades of gray. A value about halfway between the lightest and darkest values is called a *middle value*, or *middle tone*.

The use of value is absolutely essential to developing or avoiding *contrast* in your work. Contrast refers to differences. In your work, you can create contrast by placing items that aren't alike next to each other. You can accentuate contrast by placing a dark object on a light background or vice versa.

You can diminish contrast by placing an object on a background that's similar in value—for example, a polar bear on a snow-covered landscape (Figure 6).

**FIGURE 6**—*In this photograph, the contrast between the polar bear and its surroundings is very subtle.*



Various factors can make it difficult to see the values in an object. The presence of color may make values less apparent. The way light falls onto an object may create unexpected values. For example, a black object in direct sunlight may have a value lighter than a red object in the shadows. Even squinting while looking at an object may make the values more apparent.



## ***Back to the Drawing Board 2: Tonal Values***

### **Tools and Materials**

- Drawing paper
- Ruler
- Black and white acrylic or tempera paint
- Mixing palette
- Brush
- Graphite pencil

### **Objectives**

- To train your eye to recognize the relationship among tonal values
- To create a range of values using different techniques

### **Procedure**

For this exercise, you're going to create three scales that go from white to black, with varying degrees of gray in between. For each scale, you'll use a different technique as outlined below. You may find that this exercise challenges your patience because it will force you to slow down and take a patient, methodical approach to your work. This is completely intentional, since one of the artist's greatest challenges is learning patience. Effective compositions require time and effort to fully develop. Don't shortchange your work by hurrying through it.

#### ***Painted Gray Scale***

1. Draw a rectangle 8 in. by 1 in.
2. Divide the rectangle into 1-in. squares.
3. Paint the top square pure white and the bottom square pure black.
4. Mix the black and white paint together to make six shades of gray that vary in value from very light to almost black. Try to make each "step" in the scale equal so there are no visual jumps. See Figure A.

*Tip:* Black paint is much more powerful than white paint. A little black will go a long way in creating your grays. Remember this as you add black paint to create darker values.

***(Continued)***





## ***Back to the Drawing Board 2—Continued***



### ***Variable Line Weight Gray Scale***

1. Draw a rectangle 8 in. by 1 in.
2. Divide the rectangle into 1-in. squares.
3. Make the top square pure white and the bottom square pure black.
4. Develop a gray scale by creating a sense of “grayness.” To do this, draw straight lines with your pencil. Draw the same number of lines on each square, increasing the thickness of the lines as you proceed up the scale. As the lines get thicker, the squares will appear darker. See Figure B. The result should be a gray scale with even steps, similar in overall value to the painted gray scale you just created.

### ***Random Dot (Stippling) Gray Scale***

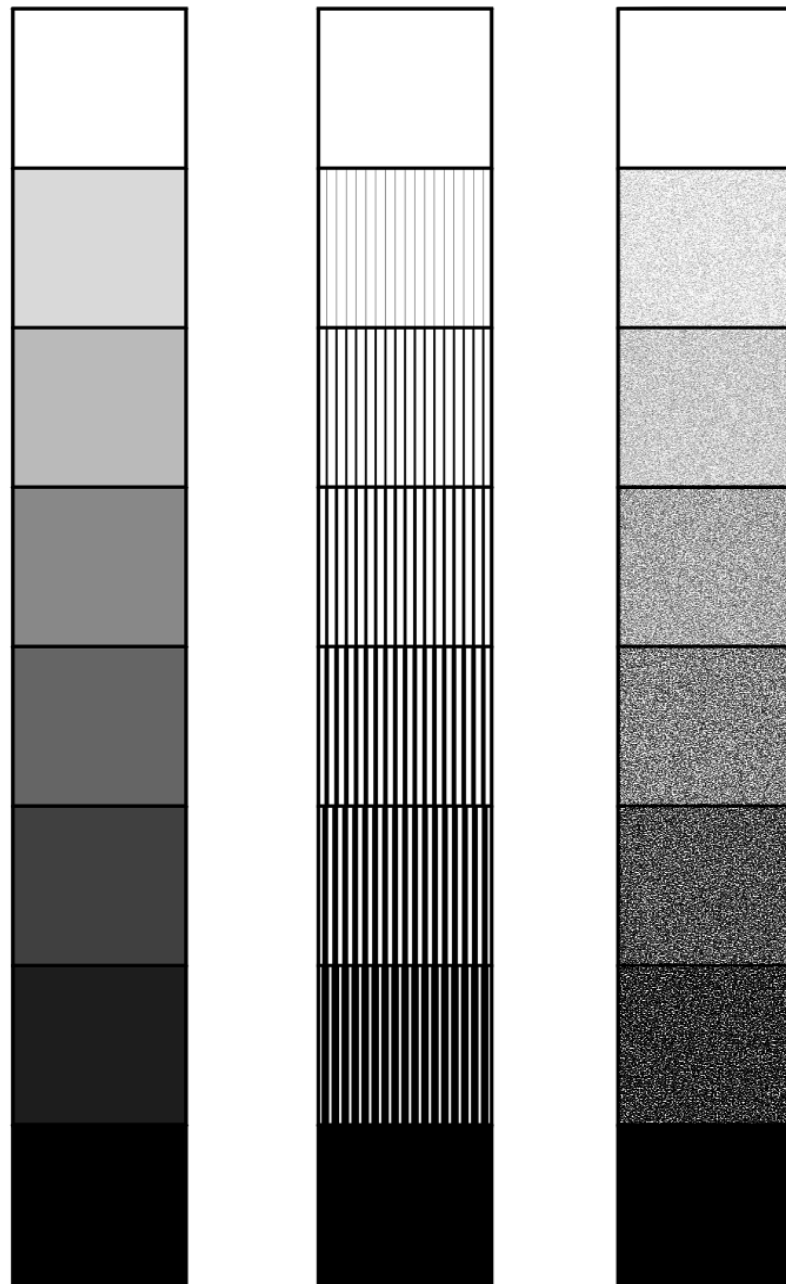
1. Draw another rectangle 8 in. by 1 in.
2. Divide the rectangle into 1-in. squares.
3. Make the top square pure white and the bottom square pure black.
4. Create an eight-step gray scale by using your pencil to make little dots in a random pattern. Increase the density of dots as you proceed from white to black, but keep the overall gray in each square even, not blotchy. See Figure C.

*Hint:* Remember to have patience. Take your time with these exercises and produce quality results. As an artist, you must discipline yourself to do your best on every project.

***(Continued)***



*Back to the Drawing Board 2—Continued*



(A)  
PAINTED  
GRAY SCALE

(B)  
VARIABLE LINE WEIGHT  
GRAY SCALE

(C)  
DOT (STIPPLING)  
GRAY SCALE

## Texture

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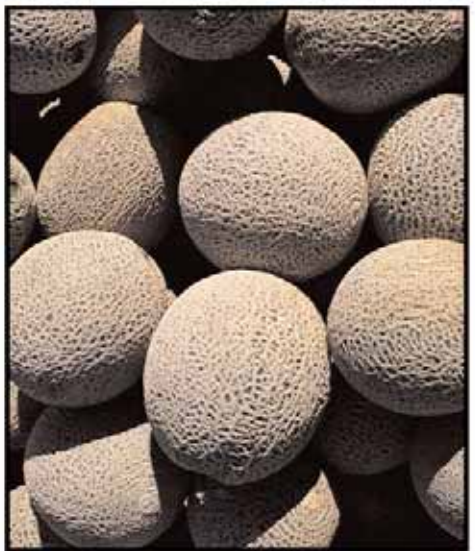
*Texture* refers to the feeling or appearance of the surface of an object (Figure 7). Texture can appeal to the sense of touch, the sense of sight, or both. The texture of an object can take many forms—rough or smooth, prickly or pebbly, shiny or dull, soft or hard.

In a drawing or painting, texture can mean two different things. First, consider the texture of the subject itself. An artist can depict the bumpy surface of an orange or the smooth surface of an apple so it looks the way it feels. Second, texture in a work of art can also refer to the texture of the medium used to create it. For example, oil paint is very rough and bumpy, while watercolor is smooth (Figure 8).

People respond to texture instinctively. Visual cues and past experiences provide hints as to what you can expect from a surface. The way in which light reflects off a surface and the small shadows it casts onto a surface also reveal the “feel” of an object before you ever touch it.

Although texture is an important element of design, don’t overemphasize it in your drawings. Texture should usually be a subtle visual property. Of the visual elements in art, shape, value, and color should take priority over texture. If you overstate texture, it can create a distraction to the viewer and possibly even misrepresent the surface you’re trying to define. For example, instead of creating the soft bumpy surface of an orange skin, you may end up with something that looks like an orange frisbee with polka dots or an object that has been riddled with machine-gun fire.

In most lighting situations, you’ll find texture shows best in the middle values of an object—not in very dark or light values. As you begin to work with creating compositions, you’ll also discover that texture in an object can be enhanced when the object is lit from the side. As an artist, you’ll probably find yourself constantly experiment with techniques for representing texture.



**FIGURE 7**—This assortment of fruit gives you an idea of the variety of different textures an artist deals with. (See Color Cards.)

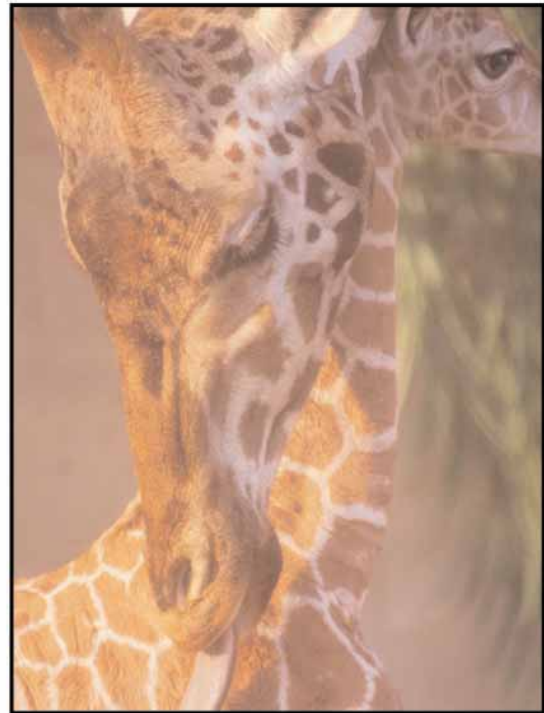


**FIGURE 8**—Notice the difference in the textures of the oil painting on the left and the watercolor on the right. (See Color Cards.)

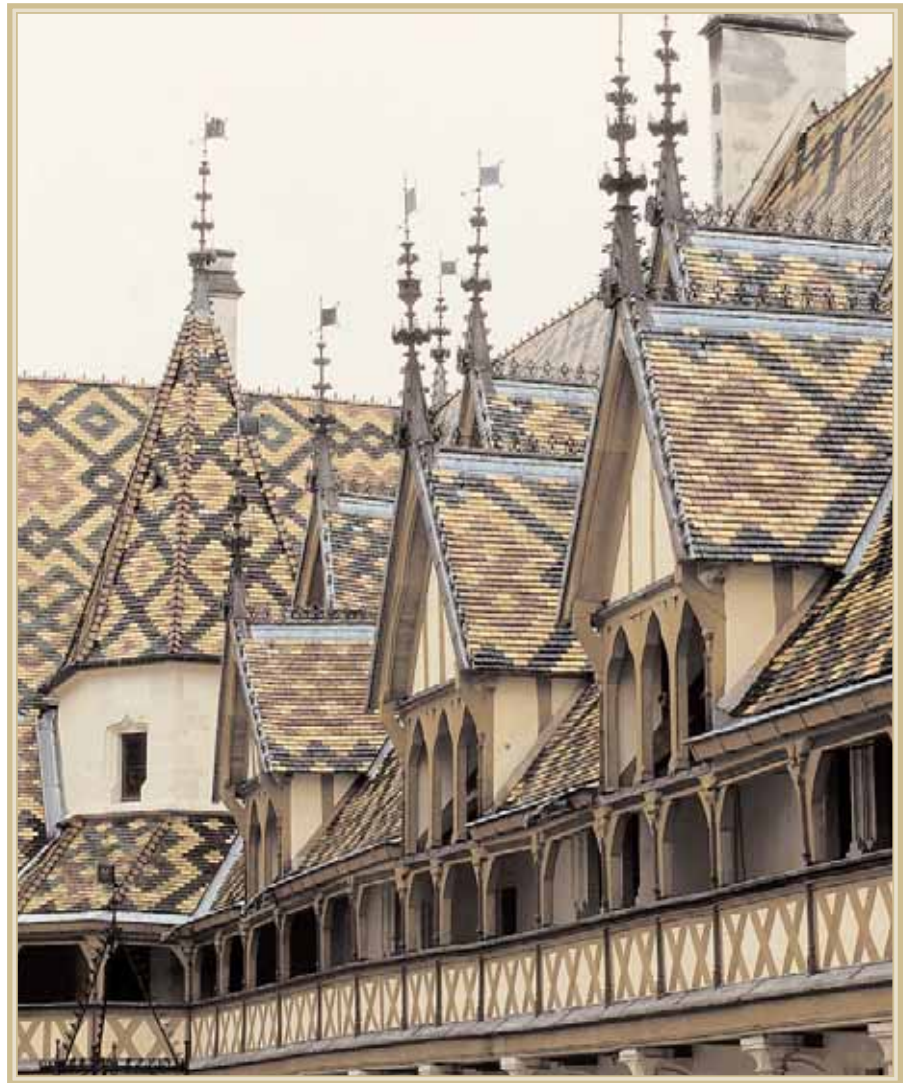
## Pattern

Closely related to texture is the element of pattern. Pattern is the appearance of an organized design on a surface. Close up, a pattern may appear as a texture. Nature provides the inspiration for many patterns we see, like plant and animal markings (Figure 9). Patterns on animals and other patterns in nature have created in people a love for patterns. Through the ages, different peoples have incorporated patterns into many of the objects they made, such as pottery, tribal masks, ritualistic artifacts, clothing, and architecture (Figure 10).

As with texture, pattern shouldn't override the shape, color, or value of an object. The structure of any form is defined by its shape and color. A pattern that's visually dominant in a drawing tends to flatten out the image.



**FIGURE 9—***Study the patterns in these photographs of plants and animals. These and other similar patterns in nature have inspired artists of all kinds. (See Color Cards.)*



**FIGURE 10**—The roof of this building in France provides a perfect example of pattern in architecture. (See Color Cards.)

Before going on to study the principles of good design in art, take time to review what you've just studied by completing *Back to the Drawing Board 3* and *Self-Check 1*.

## Back to the Drawing Board 3: Energy and Motion

### Tools and Materials

- Drawing paper
- Bristol board (10 in. by 17 in.) or paper
- Graphite pencil

### Objective

To use a simple shape to create a pattern

### Procedure

#### Five-Block Design

1. On your sheet of paper, draw a 2-in. square. Inside the square, use ink to draw a simple black geometric shape. (For our example, we used a triangle.)
2. On a second sheet of paper, make a row of five 1-in. squares.
3. Copy your shape to the *middle square* of the row so the black area occupies approximately half of the white space. See block 3 in Figure A.
4. Repeat this procedure in the other four blocks as follows:
  - a. On one side of the middle square, copy the shape in the squares so that it occupies progressively less of the white space.
  - b. On the other side, copy the shape so it occupies progressively more of the white space. Don't position your shape so it covers the entire square.

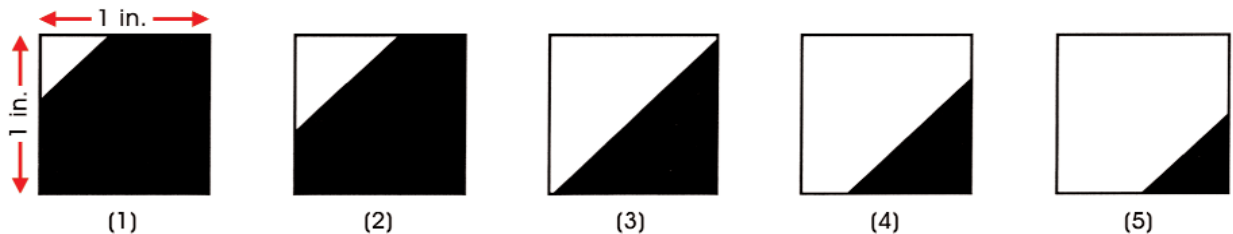


FIGURE A—Here's one example of a pattern created by a simple triangle.

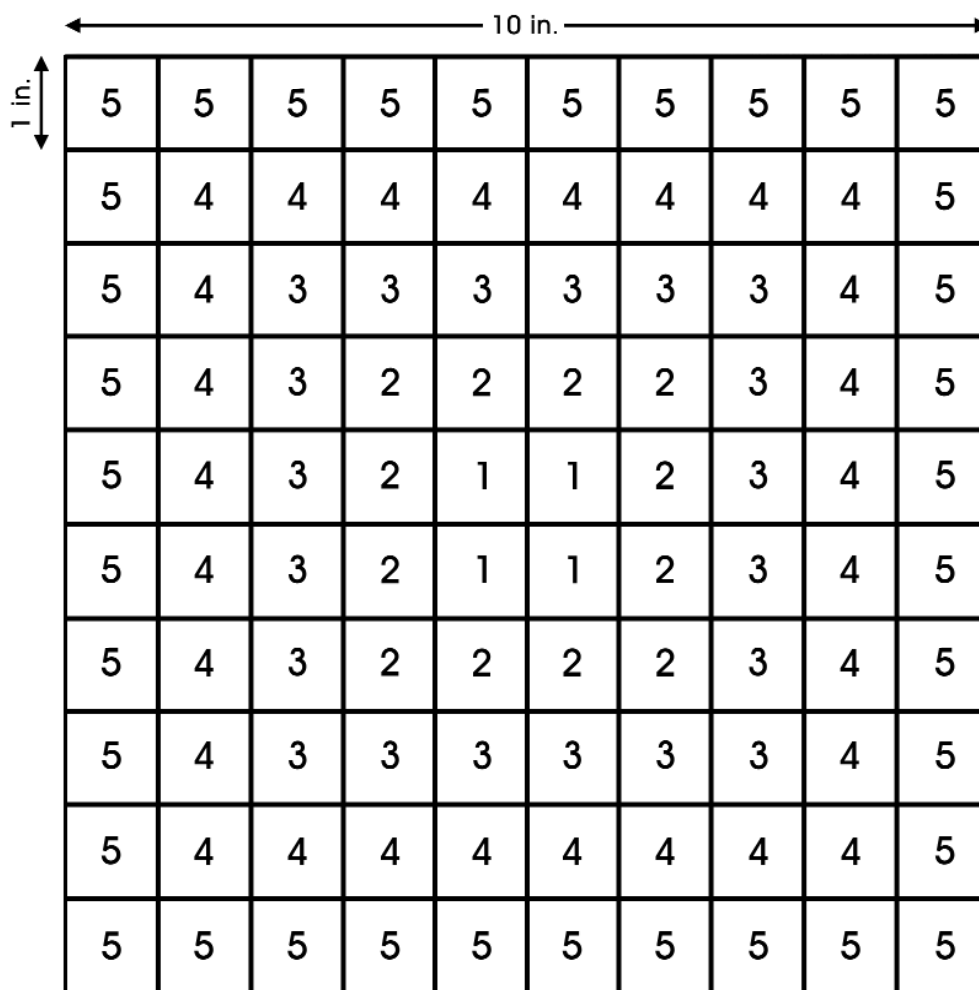
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## Back to the Drawing Board 3—Continued

### 100-Block Design

5. Number your five squares from left to right or right to left, as shown in Figure A.
6. On your Bristol board or paper, lightly draw a 10-in. square in the center of the board.
7. Lightly draw a 1-in. grid within the 10-in. square, creating 100 squares.
8. Trace the #1 design in the center four squares of your grid (the squares numbered 1 in Figure B).

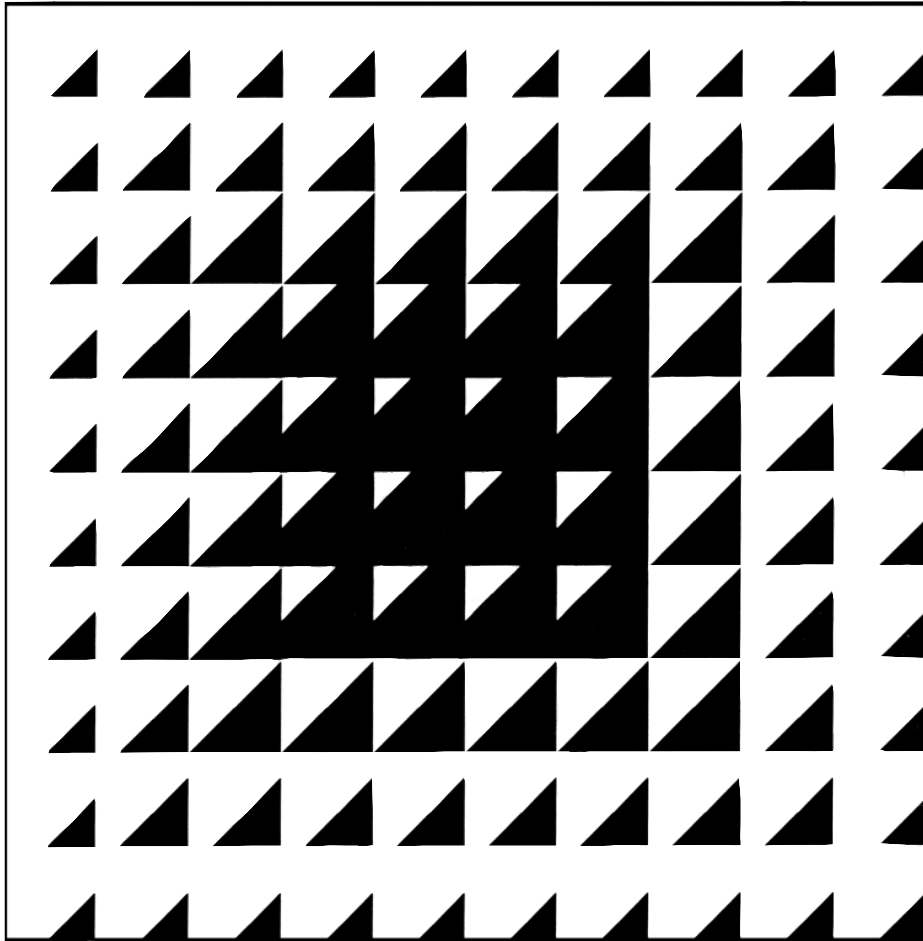
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**FIGURE B**—This grid outlines the placement of your designs.

### ***Back to the Drawing Board 3—Continued***

9. Trace the #2 design in the 12 squares that surround these four center squares (the squares numbered 2 in Figure B).
10. Fill in the remaining squares with designs #3, #4, and #5, following the chart in Figure B. Our completed design using the triangle is shown in Figure C.



***FIGURE C—The repetition of a pattern with gradual variations creates overall tonal variation and an area of emphasis.***



# Self-Check 1

**At the end of each section in *Two-Dimensional Design*, you'll be asked to pause and check your understanding of what you've just read by completing a "Self-Check." Writing the answers to these questions will help you review what you've studied so far. Please complete *Self-Check 1* now.**

1. *True or False?* Learning to see like an artist requires you to forget what you know about a subject.
2. A flat horizontal line in a drawing suggests \_\_\_\_\_ and \_\_\_\_\_.
3. *True or False?* A ball and a hula hoop are harmonious shapes.
4. The warm colors are \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_. The cool colors are \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
5. In the sentence "I like dark green clothes," the word *dark* defines the \_\_\_\_\_ of the color green.
6. *True or False?* In drawing, pattern and texture should take precedence over shape and color.

**Check your answers with those on page 69.**

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## PRINCIPLES OF DESIGN

The elements of design you just studied represent "what" the artist uses to achieve good design. The *principles of design* describe "how" the artist uses these elements. The principles you'll be examining in this section are unity, balance, rhythm, harmony, emphasis, and contrast.

### Unity

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Every once in a while, you encounter something that seems just right to you. It could be a movie, a meal, a concert, a book, a vacation, or anything else. For example think about