When a line curves around and crosses itself or intersects other lines to enclose a space, it creates a shape. Similar to a silhouette or an outline, a shape is two-dimensional. It has height and width, but no depth. It has one boundary and a single surface. We can easily identify many objects, from guitars to light bulbs, by their shape alone.

The word form describes something with three dimensions: length, width, and depth. Forms usually have weight and solidity. They may have only one continuous surface, like a Ping-Pong ball. Or they may have many surfaces, like a fish tank or a pinecone.

2-1 Consider the variety of shapes and forms that can be found on a single tree.

Trees. Photo by A. W. Porter.

2-2 The artist has allowed the familiar shape of an octopus to surround this jar.

Minoan (from Palaikastro), Minoan vase decorated with an octopus, c. 1500 BC. 11” high (28 cm). Archaeological Museum, Heraklion, Crete, Greece.
Sculptors, architects, and product designers generally work with forms. They create solid structures, which have actual volume. Cartoonists, painters, photographers, and collage artists, on the other hand, usually work in two dimensions, even when they are depicting forms. When an artist paints an apple, for example, he or she may use the apple's shape and add shading to create the illusion of three-dimensionality, or form. But the image itself has only two dimensions.

2-4 Designed for quick, efficient, and safe travel, a highway interchange creates sweeping forms in the landscape.
Freeway. Photo by J. Selleck.

2-3 The figure is created from a series of well-defined and precisely cut forms.
Zapotec (AD 200-900), Urn in the form of Cocijo, God of Lightning and Rain, from Monte Albán IIIb, AD 400-500. Fired clay, 28 1/2" x 21" x 18" (72.4 x 53.3 x 45.7 cm). Kimbell Art Museum, Fort Worth, Texas. Photo by Michael Bodycomb, 1987.
Categories of Shapes
Artists and designers use various types of shapes and forms to create their finished products. In this chapter, you will explore these types and how they affect you as both artist and viewer. Although the following sections often refer specifically to shapes, in most cases, the information may be applied to both shapes and forms.

Geometric and Organic Shapes
Shapes fit easily into two basic categories: geometric and organic. Geometric shapes are precise and sharply defined. Many of them are easy to recognize, such as circles, squares, and triangles. We often see such shapes in architecture. Also, many manufactured and hand-made products are based on geometric shapes. Nature shows us some geometric shapes and forms too. Honeybees make combs whose cells are in the shape of a hexagon, and an orange resembles the form of a sphere.

2–5 These rock formations have been shaped by natural forces such as wind and water.
*Rock.* Photo by A. W. Porter.

2–6 David Smith sculpted many similar works, which he also called *Cubi.* In all of them, he explored design problems dealing with simple geometric forms in space.
Although you may recognize certain geometric shapes in nature, most natural objects have organic shapes. Organic shapes reflect the free-flowing aspects of growth. They are often curved or rounded and appear in a variety of informal and irregular shapes. The form of a pear is organic. So too is the shape of a maple leaf.

Look at the geometric and organic shapes and forms on these pages. Do you see obvious differences and similarities? The painting by Joan Miró (fig. 2–8) uses mostly organic shapes that are curved and round. The photograph of the Bonaventure Hotel (fig. 2–7) shows that the structure is made up of geometric forms—both straight-edged rectangular forms and curving cylindrical ones.

2–8 How would you describe the various shapes that Miró uses in this work?


2–7 Architects frequently use geometric forms in their building designs. The cylindrical towers of glass and steel lend an air of elegance to the design of this hotel.

Curved and Angular Shapes

Geometric and organic shapes may be either curved or angular. Shapes that are curved are graceful, and because the eye rapidly sweeps along them without interruption, they tend to imply movement.

Angular shapes, on the other hand, are straight-edged. They suggest strength and regularity. When you look at angular shapes, your eyes move along the shape and stop momentarily where one shape connects with another. These meeting or opposing shapes may add a sense of tension to a design. If an angular shape, for instance, leans to one side, it might suggest movement.

Compare the sculptures by José de Rivera (fig. 2–11) and William Tucker (fig. 2–12). The curved shapes of the first piece describe movement that is both fluid and predictable. The second sculpture expresses quite a different feeling. The objects leaning into one another give the piece a sense of tension. Although both sculptures convey motion, Tucker's sculpture shows opposing thrusts of horizontal, vertical, and angular forms.

2–9 The shape of the nautilus shell is more clearly defined by the bands of colors that accent the curve of the shell.
Nautilus shell. Photo by A. W. Porter.

2–10 The intertwining of these roots makes strong angular shapes.
Tree roots. Photo by A. W. Porter.

Try it

To explore the contrasting feelings of different shapes, draw two designs. Construct one with only curved shapes. Construct the other with only angular shapes. You may use rulers, compasses, french curves, and triangles to help you create the shapes.
2–11 This sculpture is made with a forged rod of stainless steel.
José de Rivera (b. 1904).
*Construction 8*, 1954.
Stainless steel forged rod, 10' x 16' x 13" (25.4 x 40.6 x 35.5 cm) including base. The Museum of Modern Art, New York. Gift of Mrs. Heinz Schult. Photograph ©1998 The Museum of Modern Art, New York.

2–12 Notice the similarities between these cylinders and the roots in fig.2–10.
William Tucker (b. 1935).
*Untitled*, 1967. Steel, 80' high (203 cm). Franklin Murphy Sculpture Garden, University of California, Los Angeles. Photo by J. Selleck.
Positive and Negative Shapes

Every design—whether it is a painting, sculpture, building, or photograph—is made of positive and negative shapes. Positive shapes are the tangible, actual aspects of a design. In painting or drawing, they often represent solid forms, such as a bowl of fruit in a still life. In sculpture, the positive shapes are the solid forms of the sculpture itself.

Negative shapes are the areas that either surround the positive shapes or exist between them. In a still-life painting, they are the spaces around the bowl of fruit, between fruit forms, or in the background. In sculpture, the negative shapes are the empty spaces around and between the solid forms.

Positive and negative shapes are equally important. A successful design is one that carefully balances both. Look at the pre-Columbian Pendant figure (fig. 2–16). Notice that the artist placed two curved openings above the figure's arms. These negative shapes echo both the curves of the figure's headdress above and those of the blade below. Together, the positive and negative shapes create a unified whole.

Sculptures and silhouettes present a strong contrast between positive and negative shapes. Sometimes, however, an artist prefers to blur the boundaries between them. Study Plus Reversed by Richard Anuszkiewicz (fig. 2–13). Can you tell which shapes are positive and which are negative?

2–13 Anuszkiewicz explores optical illusion in his art, and his work helped lead the way to the development of the 1960s art movement called Op Art.

Try it

Create a design in which you balance positive and negative shapes. Use a sheet of white or cream-colored paper to represent the negative shapes. Cut a number of positive shapes from black paper. Arrange these into a variety of positions, and study the kinds of negative shapes you can produce. When you are satisfied with your design, glue down the black shapes.

2–14 The effectiveness of this piece relies heavily on the contrast between its positive and negative shapes.
Cyanotype, 10 1/8" x 7 5/8” (25.8 x 20.2 cm). J. Paul Getty Museum, Los Angeles.
About the Artist

Jacob Lawrence

Jacob Lawrence was born in 1917 and grew up in Harlem, New York, during the Great Depression. The public library (fig. 2-15) there played an important role in his life: he took his first art class in its basement, and he also spent many hours there researching African-American history. This research provided him with the ideas and information he needed to create his many series of painted images. Each series highlights an important figure (such as Harriet Tubman or Frederick Douglass) or event (such as the migration of people from the South to the North) in African-American history.

Jacob Lawrence has brought a personal vision to his work that has been little influenced by the upheavals within modern art.

2-15 How has Jacob Lawrence unified the negative areas of this painting?

Unlike most artists who progress through a variety of stylistic changes during their career, Lawrence’s style has shown little variation throughout the sixty years he has painted. The subjects of his painting focus on the things he knows best: African-American history, culture, and contemporary life.

2-16 Note how the negative (empty) areas in this figure form an important part of the overall design.
Popayán (Colombia). Pendant figure with headress, 1000-1600 AD. Cast and hammered gold, 6 ½” x 4 ¾” (16.5 x 12.1 cm). Museo del Oro, Banco de la República, Bogotá.

Try it

Paint or draw a still life. You may use a small cardboard frame as a viewfinder to help you search for effective positive and negative shapes. Once you’ve found a pleasing arrangement, begin by drawing or painting all the negative shapes. Then add the positive ones.
Qualities of Shape

Shapes and forms also have different qualities. To understand a shape's quality or appearance, you can use your senses. Your sense of sight can tell you if a shape is pleasing to look at. Use of several senses together can also give you information. Touch and sight will tell you about a form's surface and weight. Through sight, touch, taste, and even hearing its crunch, you know that an apple is hard and crisp. Being aware of appearances—such as perceived weight, surface quality, and position—will help you portray shapes and forms convincingly in your designs.

2–17 Looking at and touching the white downy head of the dandelion weed informs us of its light delicate shape. Its fine structure is designed to be set free by the wind to distribute seeds for new plants.

*Dandelion (Taraxacum officinale)*. Photo by J. Scott.

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**Try it**

Choose two objects that are about the same size. Draw one light and soft, and draw the other heavy and solid. Try to capture the contrast between the objects' surface qualities. Then create a small sculpture of each object. Use materials like thin wire or string to suggest airiness and delicacy. Use clay or wood to convey solidity and weight. Compare the two representations of each object to each other and to the original object.

2–18 The weighty appearance of this hippo is in contrast to its small size.

*Ancient Egypt, Hippopotamus, Middle Kingdom (c. 1991–1784 B.C.) or Second Intermediate Period (c. 1784–1570 B.C.). Blue faience, 8" x 3 ¾" (20.3 x 9.2 cm). Museum Appropriation.*

© Museum of Art, Rhode Island School of Design. Photo by Del Bogart.
**Light and Heavy Shapes**

There is a striking difference in the perceived weight of a cloud and that of a boulder. To draw or construct shapes effectively, an artist must understand how to convey qualities such as lightness and heaviness. Soft, floating clouds usually require a lighter touch, with a subtle blending or blurring of edges. Rocks and boulders, on the other hand, demand a strong, hard quality.

Look at the landscape painting by Thomas Moran (fig.2–19). Notice how Moran depicted the sky, the mountains, and the mist of falling water. Each is distinct and recognizable.

2–19 Artists and tourists continue to capture this famous area, now part of Yellowstone National Park.


2–20 The heaviness of the forms exaggerates the weight of the cat and provides a uniquely humorous appearance.

Fernando Botero (b. 1932). *Cat*, 1984. Bronze, 39" x 128" x 42" (99 x 325.1 x 106.7 cm). Estate of Frederick R. Weisman. Photo by J. Selleck.
Smooth and Textured Shapes

Another important quality of a shape is its surface. Is the surface flat and reflective like a pane of glass? Or is it rough and pitted like tree bark? Your eyes and your fingers move easily across the smooth surfaces of glass, sanded wood, polished metal, and plastic. The speed of your observation is slowed by a textured surface, such as an intricately knitted sweater or the shell of a turtle.

Light strongly affects the surface qualities of a shape. A smooth surface reflects light easily, and the reflections can be very bright. A heavily textured surface tends to absorb light, thereby reflecting far less. Notice the difference between the smooth and textured surfaces in fig.2–23.

By emphasizing surface qualities, artists can create shapes and forms that are both interesting and lifelike. Pay attention to surface quality: doing so can help you appreciate the unique and the not-so-unique—in nature, in art, and in everyday objects.

2–21 How has the nighttime lighting enhanced the outer surface of this theater?
Photo by A. W. Porter.

2–22 The artist uses smooth shapes to create a flowing sense in the chair’s construction.
Alan Siegel (1913–78). Terra Chair, 1977. Silver painted wood, 47” x 29 ½” x 24” (119 x 74.9 x 61 cm). Courtesy of the Frederick R. Weisman Art Foundation.

Try it

Use lightweight paper and crayons or soft-lead pencils to create rubbings. Choose a variety of surfaces: smooth, textured, and a mixture of both. Place the paper on the surface. Then rub a crayon across it until the surface texture becomes apparent. These experiments will help you create various surface textures in your own designs.
2–23 This student work demonstrates an effective combination of smooth and textured surfaces. The smooth, reflective wire and marbles stand out from the colored paper which absorbs the light.


**Try it**

Gather items with intriguing textural surfaces, such as pieces of tree bark, grains of sand, and various seeds. Design a texture collage by gluing the items onto different areas of cardboard. You might create a design that combines geometric and organic shapes.

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**About the Artwork**

**Meret Oppenheim**

**Object**

We expect common objects to have certain recognizable surface textures. Artists, however, sometimes transform everyday items into ones that are surprisingly eerie and bizarre. Meret Oppenheim, the creator of Object, was a Swiss artist of Surrealism, a twentieth-century style of art in which artists combine normally unrelated objects and situations.

The idea for Object was born during an encounter between Oppenheim and Picasso in the Café Flore in Paris. Picasso admired Oppenheim’s bracelet, which was made from brass and covered with fur, remarking that anything might be covered with fur. The story goes that Oppenheim then requested some hot water for her tea that had grown cold. The expression in French for a warm-up is *un peu plus de fourrure* ("a little more fur")—and the seed for the concept was planted.

Continuing the train of thought begun by her conversation with Picasso, Oppenheim, after leaving the café, immediately headed for a department store to purchase a teacup and spoon. The result was her renowned fur-lined cup, which is simply called Object.

The first few times that Object was exhibited, it received both praise and anger from the public. Unusual effects, such as those in Object, can provoke a strong psychological reaction in the viewer—even when the original form is simple and innocent. *Objet* became the symbol of Surrealism; it is almost always mentioned in any discussion of the movement.

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2–24 Why does this artwork make many people feel so uncomfortable?

Meret Oppenheim (1913–1985). Object (le défenseur en fourrure). 1936. Fur-covered cup, saucer, and spoon; cup 4 1/2" (10.9 cm) diameter; saucer 9 9/16" (23.7 cm) diameter; spoon 8" (20.2 cm) long; overall height 2 1/4" (7.3 cm). The Museum of Modern Art, New York, Purchase. Photograph ©1998 The Museum of Modern Art, New York. ©1999 ARS, New York/Pictorius, Zurich.
Static and Dynamic Shapes

The position of a shape or form is important and might suggest rest and stability or a feeling of energy and movement. Shapes that are in either a vertical or a horizontal position will appear to be standing still or resting; these shapes are static. Leaning or diagonal shapes suggest falling, running, or climbing. The shapes appear to be active, or dynamic. Dynamic shapes are associated with change or movement.

2–26 Compare the sweeping motion of these figures with the static poses of Ramses II (fig. 2–25). What words would you use to describe each?


2–25 Describe how the artist achieved a sense of stability and permanence in these gigantic figures.

Ancient Egypt. Four colossi of Ramses, c. 1257 BC. From the Temple of Ramses II, 59” high (18 m). Abu Simbel. Photo by Richard Putney. University of Toledo, Toledo, Ohio.

Try it

Create two small sculptures—a static arrangement and a dynamic arrangement. You may use clay, paper, or toothpicks joined with bits of clay. Note the category of shapes you use to create each sculpture: Do you rely on certain categories to make a static arrangement and others for a dynamic one?
An artist may use static shapes to produce a peaceful landscape design. For example, a combination of vertical trees and a horizontal stream can imply quiet and calm. But static shapes can also be used to convey permanence and power. Look at the monumental carvings at Abu Simbel, in Egypt (fig. 2–25). The static shapes of this ancient temple display a sense of solidity and immovability; such constructions announced to all that the great pharaohs who built them were to be obeyed and respected.

To achieve a more active feeling, an artist must turn to more dynamic shapes. Notice the curved and fluid shapes in Charles Demuth’s *Three Aerobats* (fig. 2–26). The shapes produce an atmosphere of movement and change; the figures seem to be whirling across the paper. Soft watercolors and light pencil lines underneath add to the airiness of the design.

2–27 The United Airlines terminal at Chicago’s O’Hare International Airport uses dynamic shapes to create an eye-catching show for travelers.

**Try it**

Use only vertical and horizontal shapes to make a cityscape from cut paper. Contrast this to a work that emphasizes diagonal or other dynamic shapes. How are the works different?

2–28 These robot sculptures by Nam June Paik are made of actual TVs and radios. The boxlike forms convey a sense of rigidity and awkwardness, but the lights and sounds of the TV screens and radio speakers add a dynamic quality that is not apparent in a still photograph.
Nam June Paik (b. 1932). *Family of Robots: Grandfather and Grandmother*, 1986. Video sculpture, grandmother: 80 3/4” x 50” x 19” (205 x 127 x 48 cm); grandfather: 101 1/2” x 73” x 20 1/2” (256.5 x 185 x 52 cm). Courtesy of the Holly Solomon Gallery, New York.
Form and Light

Both artificial and natural light have an enormous effect on shapes and forms. Bright sunlight, for instance, can create dark shadows and glaring highlights. But as the sun sets or goes behind a cloud, crisp, well-defined landforms change to dark, flat shapes. A great contrast in light is also noticeable in the soft light of sunrise and the dazzling light of noon.

The angle of the light also helps define the forms we see. An overhead source of light usually creates shorter shadows and can make surface textures indistinct. A source of light from one side will lengthen and distort the shadows, calling attention to details of surface texture. (See Chapter 6 for more about the way light affects textures.)

Try it

Collect objects with varying surfaces and angles. You may wish to use something round, like a globe; something with a flat, shiny surface, like a piece of metal; and something with pleats or folds, like fabric or paper. Cast light from a floodlight or lamp onto the objects from different angles to dramatize the forms.

2-29 How does the angle of the light in each of these three images define the form of the face?
Photos by T. Fiorelli.
2–30 The powerful forms of this building are emphasized by the late-afternoon sunlight cast against the exterior walls. The contrasts of light and shadow enhance the solid structural forms.

*St. Francis of Assisi, Ranchos de Taos, New Mexico.* Photo by A. W. Porter.

2–31 How does the artist draw the viewer’s attention to this work?

On round or curved forms, light creates gradual changes and shadows. Usually, the brightest and darkest areas are separated from one another by many gradations of light. On angular and sharp-edged forms, however, the changes can be sudden. The brightest highlights may appear right next to the darkest shadows. These changes from light to dark are discussed more fully in Chapter 3.

Light is a powerful part of design; it has a strong impact on both the shapes and forms you see and those you reproduce in your art. An understanding of light and shadow is critical to the mastery of form. Experiment with light and try to duplicate its numerous effects.

2-32 Impressionist Claude Monet devoted countless hours to painting outdoors. He worked at various times of day and during different seasons. Compare his two 1894 paintings of Rouen Cathedral, in France.

Claude Monet (1840–1926), *Rouen Cathedral Façade and Tour d'Albane (Morning Effect)*, 1894. Oil on canvas, 41 3/8" x 29 3/4" (106.1 x 76.3 cm), Tompkins Collection. Courtesy of the Museum of Fine Arts, Boston.

2-33 How has the artist used shadows and colors to show mid-day light?

2–34 Dan Flavin makes forms with light. Some of the lighting tubes in this piece are not visible to the viewer. The artist wants us to focus on the cast light, not on the lighting tubes themselves. What kind of forms do you see?

Dan Flavin (1933–96), Untitled (to Jamie Lee) One, 1971. Blue, pink, yellow, and green fluorescent light (first from edition of five), 96" long (243.8 cm). Columbus Museum of Art, Ohio; Gift of Mr. and Mrs. William King Westwater. ©1999 Estate of Dan Flavin/ARS, New York.

2–35 This still-life drawing explores the effect of light on curved forms.


Try it

In your home, school, or neighborhood, look at shadows created by artificial and by natural light. Using just black and white media, experiment with designs that capture any shadows with unusual or intriguing shapes.
2–36 Compare this sculpture with figs. 2–6, 2–11. What are their similarities and differences?
Hans Van De Bovenkamp (b. 1938). Phoenix, 1990. Painted steel, 12' x 10' x 11' (3.7 x 3 x 3.4 m). Photo by A. W. Porter.

2–37 Using the terms you have learned in this chapter, how would you describe these natural forms?
Cactus. Photo by A. W. Porter.

2–38 What are the positive and negative areas in this painting?
2–39 The Japanese are masters at making compositions built of shapes. Notice how flat the figure is. Can you see the area where the artist has added a sense of form?

2–40 Analyze how this student work makes use of shapes and forms to create a dynamic composition.

Review Questions
1. Define shape and form. Give an example of shape and a related form, such as a circle and a Ping-Pong ball.
2. What is the difference between a geometric and an organic shape? Give an example of each.
3. What are positive and negative shapes? Name one image in this chapter that you think shows an effective use of positive and negative shapes. Identify the main positive and negative shapes in the image.
4. List six qualities of shapes. Select one image in this chapter, and use the names of these qualities to describe the design.
5. How does light influence how we see form? Name an artist who was interested in the effect of light on form.
6. What is unusual about Meret Oppenheim’s Object? What style of art is this?
7. What subjects does Jacob Lawrence depict in his painting series? Why did he choose to depict these subjects?