#### LESSON

## Space

**Space** refers to both outer space and inner space. Rockets move through outer space to explore other planets. People move through the inner space of rooms and buildings. Space can be flat and two-dimensional, such as the space of a window. Space can also be three-dimensional, such as the space filled with water in a swimming pool.

# Space and Its Relationship to Shape and Form

Shapes and forms exist in space. **Space** is *the element of art that refers to the emptiness or area between, around, above, below, or within objects.* All objects take up space. You, for example, are a living, breathing form moving through space.

Shapes and forms are defined by the space around and within them. They depend on space for their existence. This is why it is important to understand the relationship of space to shapes and forms.

#### **Positive and Negative Spaces**

In both two- and three-dimensional art, the shapes or forms are called the *positive space* or the *figure*. The empty spaces between the shapes or forms are called *negative spaces* or *ground*. Look at **Figure 5.8** and read the caption for an example of figure and ground. In a portrait, the image of the person is the positive space; the negative space is the area surrounding the person.





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FIGURE 5.8 Do you see a vase or do you see two profiles of Picasso? Johns has deliberately organized this lithograph as a visual puzzle to confuse the viewer. One minute the faces are very clear and they seem to be the figure while the space between the profiles is the ground. The next moment the vase between the profiles becomes the figure and the space around the vase becomes the ground.



space holograms

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Jasper Johns. *Cups 4 Picasso*. 1972. Lithograph. 57.2 × 82 cm (22<sup>1</sup>/<sub>2</sub> × 32<sup>1</sup>/<sub>4</sub>"). Museum of Modern Art, New York, New York. Gift of Celeste Bartos. © Jasper Johns/Licensed by VAGA, New York, NY.



▲ **FIGURE 5.9** In this sculpture, Brancusi uses the lack of space between the two figures to symbolize the concept of the togetherness, the unity, of a couple in love. Compare and contrast the ways these forms are balanced with the artwork in Figure 5.6 on page 101.

Constantin Brancusi. *The Kiss.* c. 1908. Stone. Height 50.2 cm (19<sup>3</sup>/<sub>4</sub>"). Musée National d'Art Moderne, Centre Georges Pompidou, Paris, France. © 2003 Artists Rights Society (ARS), New York/ADAGP, Paris.

The shape and size of negative spaces affect the way you interpret positive spaces. Large negative spaces around positive spaces may express loneliness or freedom. When the positive spaces are crowded together, you may feel tension or togetherness (Figure 5.9). The full meaning of a work depends on the interaction between the positive and negative spaces. It is not always easy to tell which are the positive spaces and which are the negative spaces in twodimensional art. Sometimes it is difficult to identify the negative space. This is because some artists give equal emphasis to both the figure and the ground.

Sometimes artists even try to confuse the viewer. They create positive and negative spaces that reverse themselves while you are looking at them. These visual puzzles fascinate some viewers (Figure 5.10).

Activity

Experimenting with Space

**Creating Visual Solutions Using Direct Observation.** Select a group of objects to draw from direct observation. Make an arrangement with a variety of negative spaces between the shapes. Draw the arrangement lightly with pencil or chalk. Finish the work by (a) coloring only the negative spaces with crayons or paint, or (b) filling the negative spaces with closely drawn sets of parallel lines. Leave the positive spaces empty. What shapes did the negative spaces take? **Computer Option.** Use the Rectangle shape tool to draw a solid rectangle approximately 3" x 4" in the center of the screen. Explore the different shapes of Selection tools to select and move parts of the rectangle away from the original shape. Continue selecting and moving until the rectangle has been broken into many smaller parts with varying spaces in between. Save and title your work when you have created an interesting composition by adding space within the form.

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Portrait of M. C. Escher. © 1998

Cordon Art, Baarn, Holland. All rights reserved. Born in Leeuwarden, Holland, M. C. Escher (**esh**-ur) studied graphic art at Harlem's School of Architecture and Ornamental Design. He concentrated on illustrating his eccentric inner visions and his fascination with the laws of nature. In his lithographs, he explored a variety of visual jokes and trickery, such as optical illusions and distorted or impossible perspective.

Escher's works achieve their visual puzzles through his clever manipulation of positive and negative space. They skillfully switch forms into places where the viewer would logically expect space, or what appears to be the outer surface of an object reverses into an inner space.

Escher also created designs using positive and negative space to transform one object to another. A flock of birds on the left side of the picture becomes a school of fish on the right side. Each time a change takes place, the negative space becomes dominant and transforms into the new object.



► FIGURE 5.10 At first this print looks normal. Water is falling to turn a water wheel. However, follow the water from the base of the fall. It runs uphill! Escher has created a visual puzzle using the mathematics of perspective.

M. C. Escher. *Waterfall*. 1961. Lithograph. © 1998 Cordon Art, Baarn, Holland. All rights reserved.

### Space in Three-Dimensional Art

*Over, under, through, behind,* and *around* are words that describe threedimensional space. Architecture, sculpture, weaving, ceramics, and jewelry are three-dimensional art forms. They all take up real space. You can walk around, look through, look behind, peer over, and reach into threedimensional art.



▲ FIGURE 5.11 The interior of this cathedral was designed so that the stained glass and the vertical columns would pull your eyes upward toward the heavens.

Architects shape space. They design structures that enclose a variety of spaces for people. They create large spaces for group activities, such as the one you see in **Figure 5.11**. They also create small spaces for privacy. Landscape architects and city planners are also involved in planning spaces for people to use.

Negative areas in three-dimensional art are very real. Most three-dimensional works are meant to be *freestanding*, which means they are surrounded by negative space (**Figure 5.12**). The viewer must move through this negative space to see all of the different views of a threedimensional work.

Relief sculpture is not intended to be freestanding. It projects out from a flat surface into negative space. You can find relief sculpture on ceramic pots and plaster ceilings. When the positive areas project slightly from the flat surface, the work is called *bas relief*, or *low relief* (Figure 5.13). When the positive areas project farther out, the work is called *high relief*.

Most jewelry is planned as relief sculpture to decorate human surfaces. The inside of a ring or the back of a pendant is smooth. It is not meant to be seen; it simply rests on the person's surface.

Today many artists are experimenting and changing traditional art forms. Printmakers are creating relief prints. Some printmakers are molding relief designs in handmade paper. Painters are adding a third dimension to the painted surface. Some painters are cutting or tearing real negative spaces in twodimensional surfaces.

Weaving has also gone in new directions. It started as a practical craft, with weavers making two-dimensional fabrics for clothing, and has evolved into an art form. Today hand weavers are

Reims Cathedral (interior). Reims, France. Begun c. 1225.



creating relief hangings and threedimensional woven sculptures.

Photographers are creating **holograms**, *images in three dimensions created with a laser beam*. Sculptors are making *kinetic*, or moving, sculpture.

## Activity

#### Using Three Dimensions

Applying Your Skills. Make a freestanding, three-dimensional design that projects into negative space on all sides. Using pieces of cardboard tubing and small boxes, join the design pieces with glue and tape. Paint the finished work in one color to emphasize its form.

Set up a spotlight on one side of your freestanding sculpture. In your sketchbook draw the contours of the sculpture and the shape of its shadow. Move the spotlight to another angle. Draw the sculpture and its shadow. Notice how the changing light changes the shadow's shape.

**Computer Option.** Draw a solid cube or rectangular form so the top, side, and front are visible. Add shading by filling each surface with a different value of a color, texture, or gradient. Remove an area within the form by using the Eraser or Selection tool. Explore adding shadows and lines to accurately depict the inner space you see.



- **1.** Define *positive space* and *negative space*.
- **2.** What words specifically describe three-dimensional art?
- **3.** Compare and contrast the use of space in the artworks on this page.



✓ FIGURE 5.12 This example of folk art from Peru is a freestanding sculpture. Look carefully and you can see forms peeking out from the back. To see them you would have to walk around to the back of the work.

Artist unknown. *Church Quinua*, Ayacucho, Peru. 1958. Painted earthenware. Girard Foundation Collection at the Museum of International Folk Art, a unit of the Museum of New Mexico, Santa Fe, New Mexico.



▲ FIGURE 5.13 An example of low relief. Since the design was for the back of a chair, the relief has to be low relief or the chair back would be too uncomfortable to lean against.

Queen Ankhesenamun and King Tutankhamon. Egypt, Eighteenth Dynasty. Wood overlaid with gold, silver, semiprecious stones, and glass paste. Egyptian Museum, Cairo, Egypt. Scala/Art Resource, New York.

