

Space and Volume

by Sophia



WHAT'S COVERED

Artists use various techniques to give the illusion of three dimensions. These techniques are essential to creating space and volume in two-dimensional compositions. By using these techniques, artists can focus on the depiction of three dimensions within individual forms and on the space between forms. In this lesson you will learn about:

1. 2D Modeling and Negative Space

When artists use shadow to make a form look rounded or three dimensional, this is called **modeling**. Shadow gives the impression of depth, without which objects appear flat.

IN CONTEXT

Take a look at this charcoal drawing below as an example. Notice how the use of shadow on her right side, particularly on her lower jaw and neck, gives the impression of depth and makes the image appear more realistic.





Charcoal drawing of Young Girl by John Vanderpoel

If it is used incorrectly, shadow alone will not make an object appear natural and three dimensional. Typically a single light source for the painting is used as a way to create more dramatic shifts in light to dark. It's this contrast that gives an image visual depth.



DID YOU KNOW

Too many light sources tend to remove shadows, which can flatten an image.

IN CONTEXT

Take, for example, this portrait of the Spanish painter Juan de Pareja by another Spanish painter, Diego Velázquez. Velázquez utilizes a single light source in the upper right-hand corner as a means of projecting shadow and adding contrast.



Portrait of Juan de Pareja by Diego Velázquez

And in the last portrait of Sir Thomas More below, you can see that the background of the portrait is a single, flat color. This portrait uses a curtain in the background as a backdrop. The light source is in the upper right-hand corner (notice the yellow lines) and creates an area of shadow between the subject and the curtain on the left, and above his shoulder on the right.



Portrait of Sir Thomas More by Hans Holbein the Younger

The two red arrows indicate an area of **negative space**, or space between objects, behind him. The negative space is between Sir Thomas More and the curtain. The rendering of negative space is another tool used by artists to suggest depth.



TERMS TO KNOW

Modeling (2D)

The use of line and shadow to create the illusion of roundness and depth

Negative Space

The space between two objects

2. Hatching and Cross-Hatching

Hatching and cross-hatching are techniques often used by printmakers to create shadow and depth.

Hatching, or parallel lines, and **cross-hatching**, which are parallel and perpendicular lines, leave areas that will not transfer ink to paper, so gradients in light and dark can be achieved that wouldn't be possible otherwise.

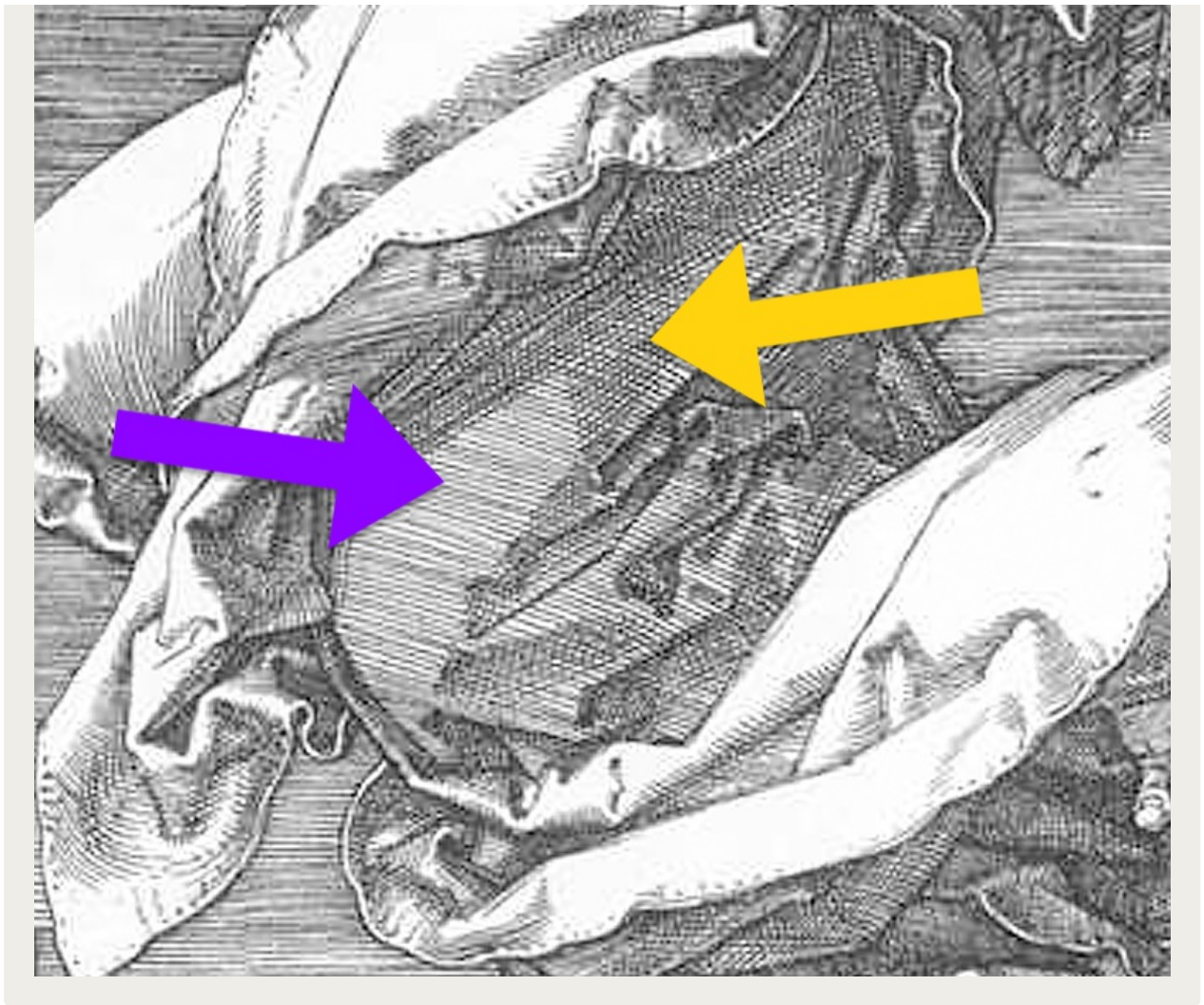
IN CONTEXT

Take a look below at this etching by Albrecht Durer. He uses hatching and cross-hatching extensively throughout the composition to give the impression of shadow and depth.



The Sudarium Displayed by Two Angels by Albrecht Durer

When you take a closer look at the image below, you can see the parallel lines that indicate hatching (purple arrow) and cross-hatching (yellow arrow).



BIG IDEA

Artists use line, shadow, hatching, and cross-hatching to depict the illusion of three dimensions in a two-dimensional composition.



TERMS TO KNOW

Hatching

The use of parallel straight lines, particularly in printmaking and drawing, to indicate shadow and depth

Cross-Hatching

The use of lines that cross over, particularly in printmaking and drawing, to indicate shadow and depth



SUMMARY

Techniques that create space and volume in two-dimensional compositions are often used by artists. By using techniques such as **2D modeling** and **negative space**, artists can focus on the depiction of three dimensions within individual forms and on the space between forms.

Finally, **hatching**, or the use of parallel lines, and **cross-hatching**, the use of parallel and perpendicular lines that cross over, are both techniques that indicate shadow and depth when used in works of art.

Source: THIS TUTORIAL WAS AUTHORED BY IAN MCCONNELL FOR SOPHIA LEARNING. Please see our [Terms of Use](#).



TERMS TO KNOW

Cross-hatching

The use of lines that cross over, particularly in printmaking and drawing, to indicate shadow and depth.

Hatching

The use of parallel straight lines, particularly in printmaking and drawing, to indicate shadow and depth.

Modeling (2D)

The use of line and shadow to create the illusion of roundness and depth.

Negative space

The space between two objects.