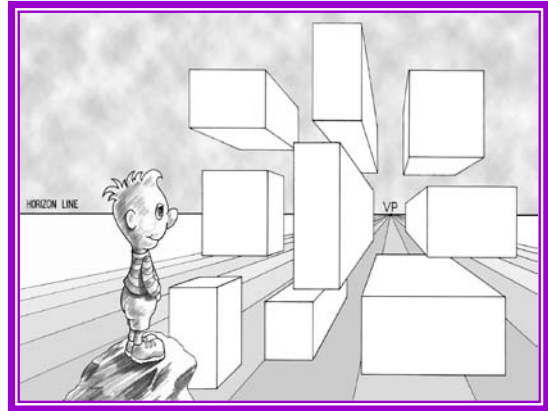


BASIC PERSPECTIVE FOR BEGINNERS

Brenda Hoddinott

E-01 BEGINNER: PERSPECTIVE ONE



In this article, I discuss and illustrate how the secrets of perspective help create the illusion of three-dimensional spaces in drawings. Perspective is the very foundation, on which your drawing compositions will either stand or fall. With proper use of perspective, your representational drawings become visually correct and more realistic. Understanding the rules of perspective can even enhance your creative skills, by allowing you the confidence to explore new concepts in depth perception in your drawings.

Invaluable information is offered throughout the following three sections:

- ✚ **ABOVE, BELOW, AND ON THE HORIZON LINE:** an in-depth discussion surrounding the fundamental components of geometric perspective, including horizon line, vanishing point(s), and perspective lines. This section is divided into the following four parts:
 - Your eye level is on the horizon
 - A worm's eye view
 - A bird's eye view
 - View from a level perspective
- ✚ **DISAPPEARING INTO A VANISHING POINT:** an introduction to various tools used by artists for creating the illusions of depth, including overlapping, size differences, and arrangement, as well as an illustrated explanation of one-point perspective.
- ✚ **EXPANDING ON ELEMENTS OF PERSPECTIVE:** a discussion surrounding two more integral elements of perspective, aerial (or atmospheric) perspective and foreshortening.
 - Fading into distant space with atmospheric perspective
 - Shortening subjects with foreshortening

12 PAGES – 18 ILLUSTRATIONS

This article is recommended for artists of all ages and abilities, as well as home schooling, academic and recreational fine art educators.

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ABOVE, BELOW, AND ON THE HORIZON LINE

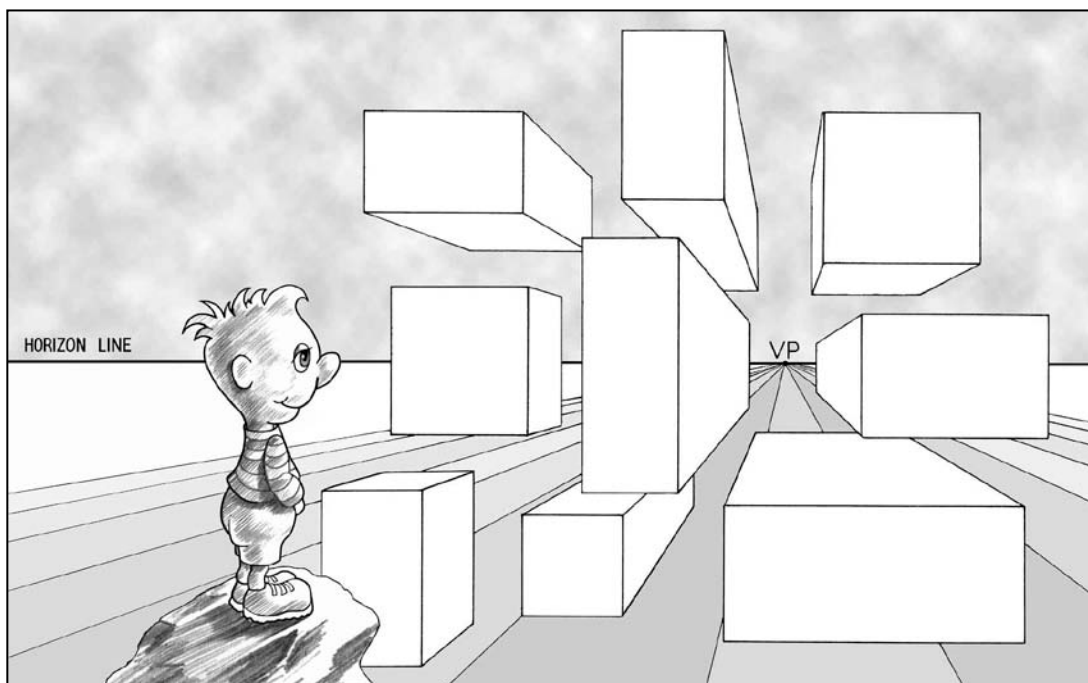
Perspective is a method of representing subjects (and the individual parts of subjects) in a drawing, in such a way that they seem to recede into distant space, and appear smaller the farther they are away from you. Many of Mother Nature's creations, such as trees and flowers, are somewhat forgiving of an artist's minor mistakes in perspective. However, most human-made objects, people, and animals need to be drawn with proper perspective in order to appear believable and proportionately correct. *Proportion* is the relationship in size of one component of a drawing to another or others.

YOUR EYE LEVEL IS ON THE HORIZON

In art, a *horizon line* is a horizontal line (usually invisible in real life) sometimes referred to as *eye level*, that divides your line of vision when you look straight ahead. Objects below this line are below your eye level, and objects above it are above your eye level. Remember, your eye level and the horizon line, are one and the same. Look straight ahead (rather than up or down), and the horizon line is directly in front of you. Wherever you go, from the top of the highest mountain, to the lowest valley, your eye level always stays with you. The easiest way to identify the location of the horizon line in an actual scene is to visually mark it with your eye level.

In this drawing, rendered with simple one-point perspective, consider yourself the viewer and visually locate the horizon line. *One point perspective* occurs when the frontal face of an object (such as a cube) is closest to you, and its edges recede in space and converge at a single vanishing point. The *vanishing point* is the point (identified with a small dot marked VP) on the horizon line where the straight lines of an object converge and seem to disappear.

ILLUSTRATION 01-01



A horizon line is drawn horizontal and parallel to the top and bottom of a square or rectangular drawing space. In a drawing, you determine the viewer's eye level, by choosing the horizontal position of the horizon line. You control whether you want viewers to feel like they're above, below, or at eye level with the objects in your drawing. By examining various drawings, with the horizon line in different locations, you begin to understand how the eye level seems to change.

In the first drawing below (on the left), the horizon line is near the bottom of the drawing space. *Drawing space* (sometimes called a *drawing format*) refers to the area of a drawing surface within a specific perimeter, outlined by a shape of any size, such as a square, rectangle or circle. The cubes are above the horizon line and have perspective lines that extend downward from their edges and connect with the vanishing point. *Perspective lines* (invisible in real life) are lines that extend from the edges of objects and recede into distant space, until they finally seem to vanish at the vanishing point (VP).

In the second drawing below (on the right), the horizon line is close to the top of the drawing space. The perspective lines of cubes below the horizon line angle upward and converge at the vanishing point.

ILLUSTRATION 01-02

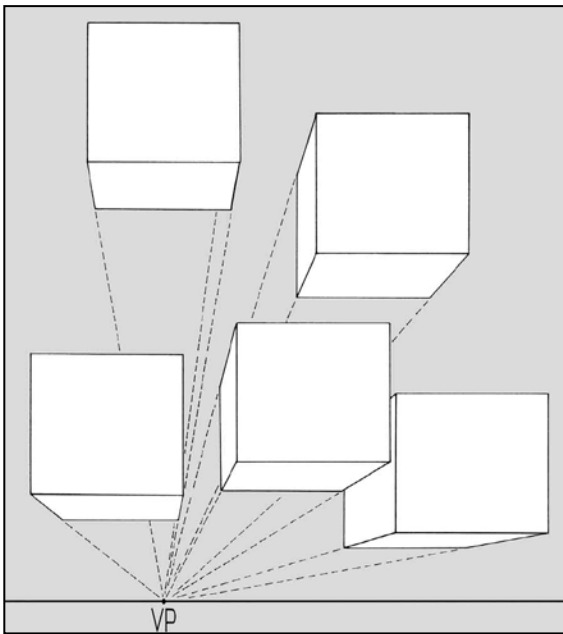
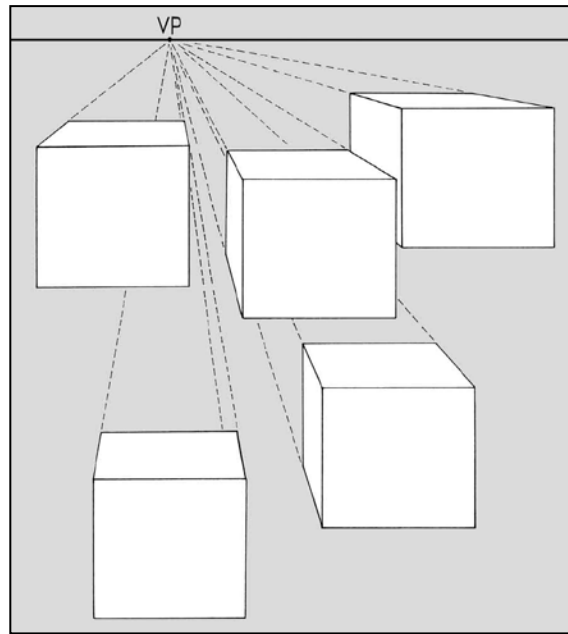


ILLUSTRATION 01-03



Drawing objects above the horizon line follows same perspective rules as drawing objects below. Have a closer look at the above two drawings. Do you notice anything similar about them? Yes, you guessed it. They are the exact same drawing, but one is upside down. Just a little demonstration of the potential illusions of geometric perspective!

Lines of objects, that are parallel or perpendicular (at a right angle) to the horizon line, don't appear to go back in space and therefore rarely meet the vanishing point. However, exceptions to this rule can occur when one side of an object lines up perpendicular to the position of the vanishing point. Also, one horizontal line of an object can sometimes overlap the horizon line.

A WORM'S EYE VIEW

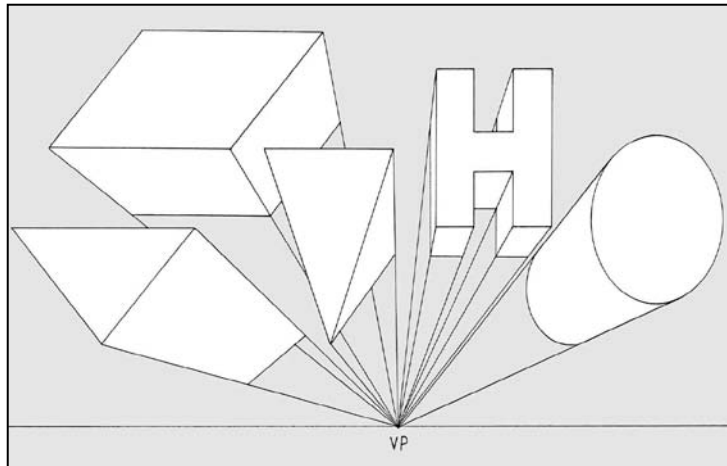
To create the illusion that the viewer is looking upward, draw your subjects above the horizon line. In the next drawing, the horizon line is below the various objects. The perspective lines all lead downward to the same vanishing point.

You sense that you are looking up into the sky, or maybe standing in a valley looking upward.

The various three-dimensional shapes look like helium filled balloons, and the perspective lines seem to hold them anchored at the vanishing point.

If the perspective lines were erased, they would appear to be floating or flying.

ILLUSTRATION 01-04

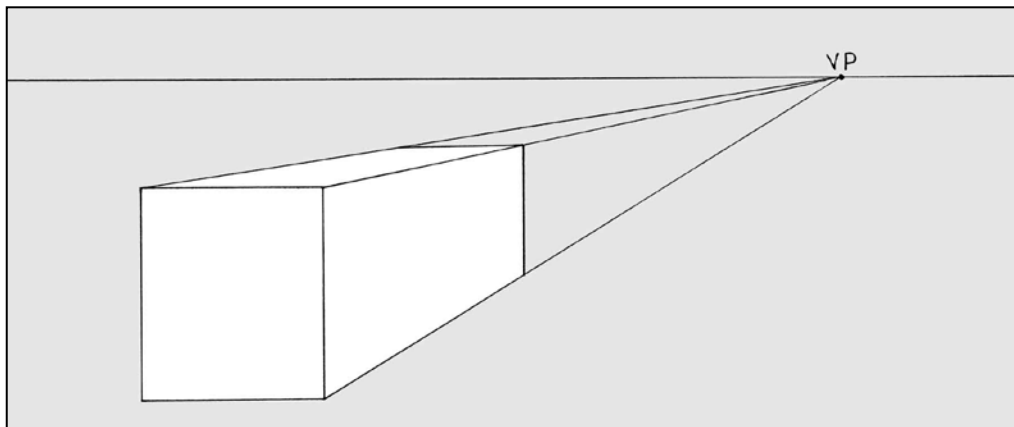


A BIRD'S EYE VIEW

If you want viewers to feel like they are looking downward, draw objects below the horizon line. In this drawing, consider yourself the viewer. The horizon line is close to the top of the drawing space which makes you feel like you are looking down at the cube.

ILLUSTRATION 01-05

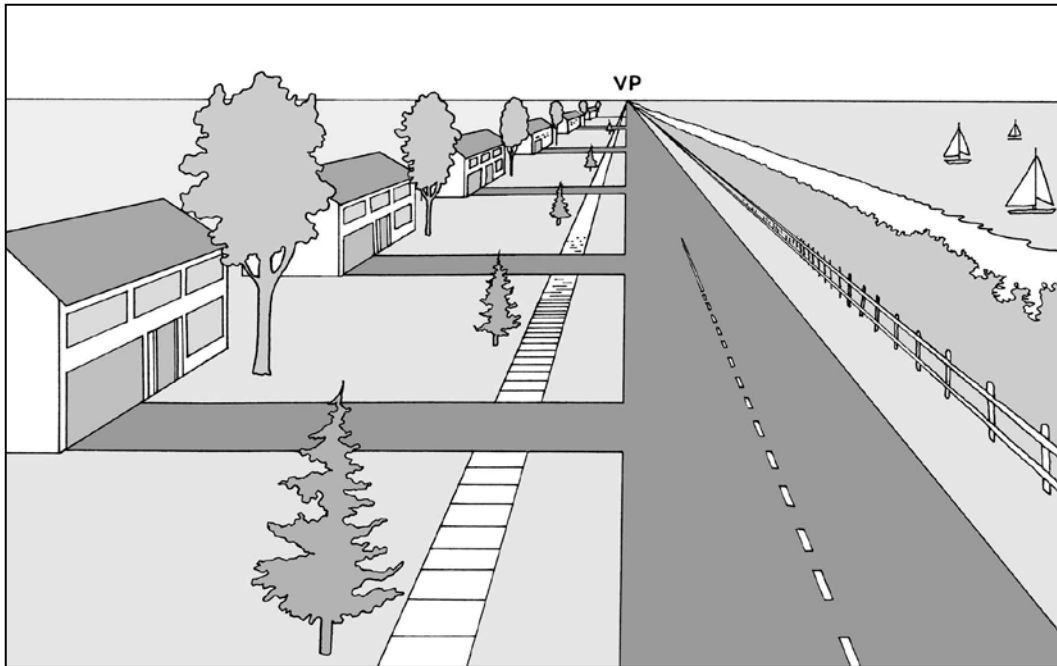
To discover how to render one-point perspective, refer to *E-04 Beginner: One Point Perspective*.



As you look at the next drawing, consider yourself the viewer. The horizon line is close to the top of the drawing space. Imagine you are standing on the top of a high cliff, or floating in a hot air balloon. Note the position of the vanishing point (marked VP).

The perspective lines of the various objects (such as houses, sidewalks, highway, fence, etc.) are easily identified by visually following their edges back to the vanishing point. These perspective lines all angle upward, toward the horizon line, and converge at the vanishing point

ILLUSTRATION 01-06



VIEW FROM A LEVEL PERSPECTIVE

You are at eye level as you look into the next drawing. The horizon line is the first horizontal line, almost halfway down from the top of the drawing space.

Examine the angular lines (neither horizontal nor vertical) that define the edges of the objects. Visually follow them to the vanishing point on the horizon line and note that:

ILLUSTRATION 01-07

- ✚ Angular lines of objects at your eye level (touching the horizon line) converge both downward and upward.
- ✚ The lines of objects above your eye level (above the horizon line) converge downward.
- ✚ Angular lines of objects below your eye level converge upward.

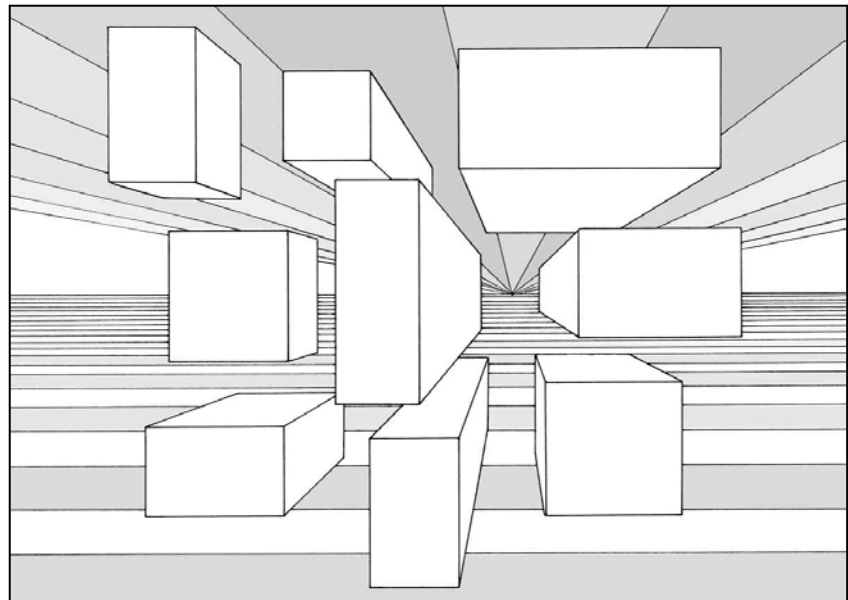
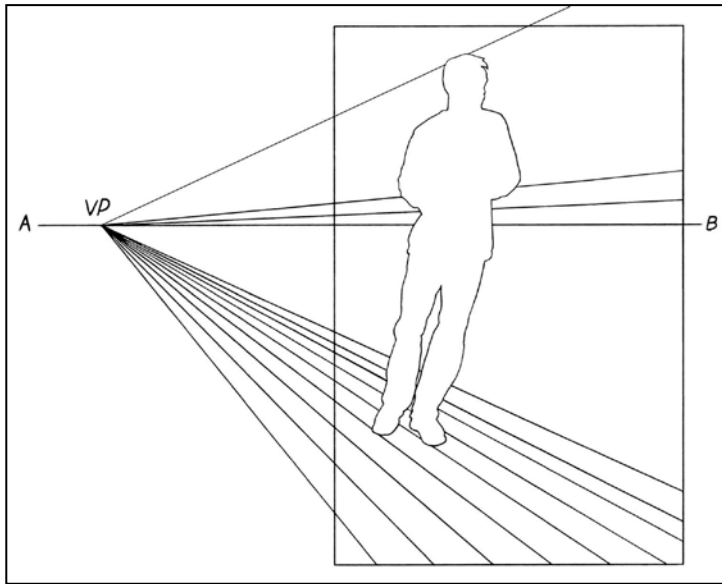


ILLUSTRATION 01-08



An object (person, animal, etc.) can have some of its parts above, on, and below the horizon line. Line AB marks the horizon line in this preliminary drawing of a young man standing on a deck.

Note that the perspective lines all originate from the same vanishing point and angle outward in various directions (and at various angles) to meet up with various parts of his body, above, on, and below the horizon line.

ILLUSTRATION 01-09

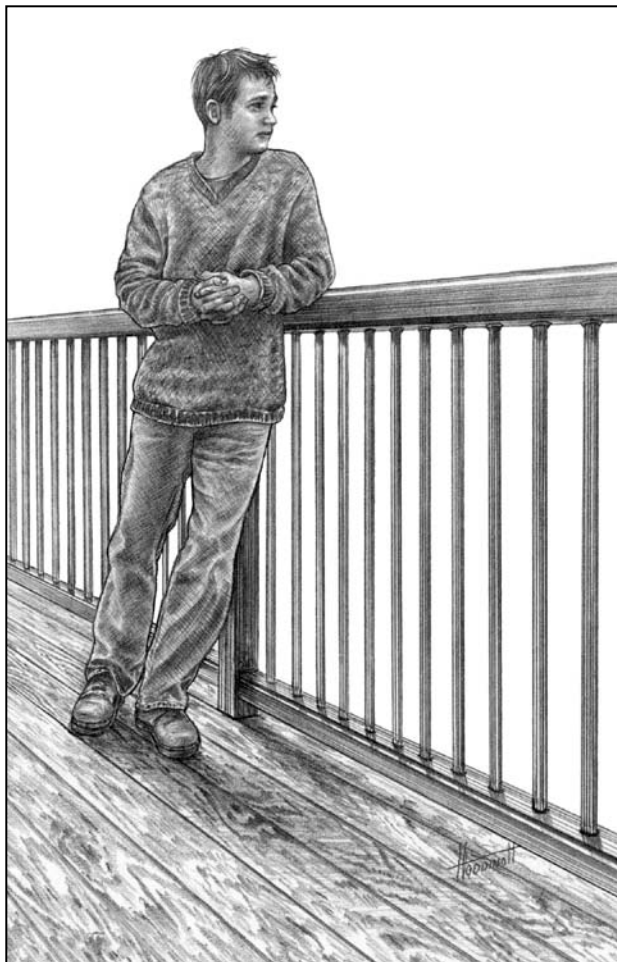
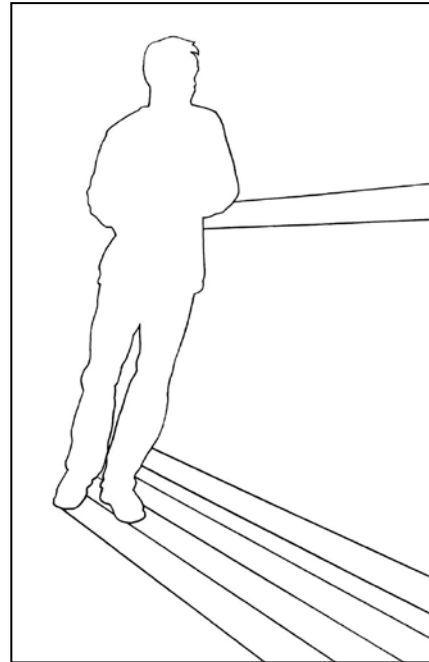


ILLUSTRATION 01-10



Compare the horizontal sections of the railing and the boards of the deck in the drawing on the left, to the various perspective lines in the drawing on the right. The boards seem to recede into distant space, in that they become slightly narrower the farther back they are.

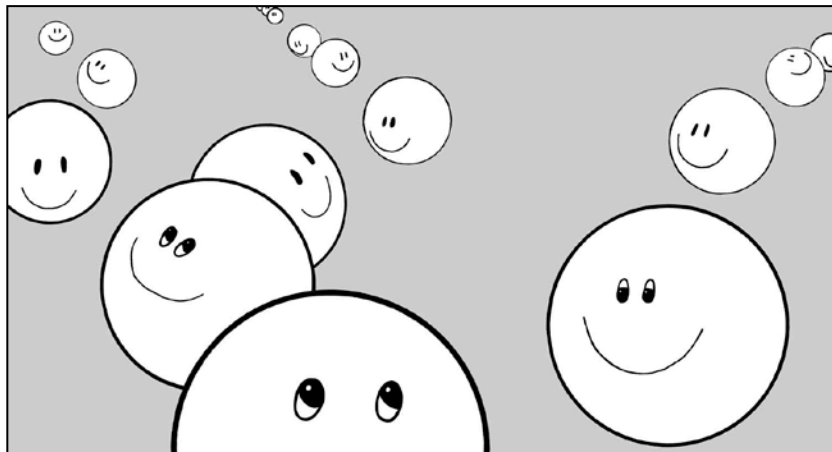
DISAPPEARING INTO A VANISHING POINT

As you begin to understand perspective, you discover how to draw objects the size you actually see them, instead of the size you know them to be.

In the next drawing, assume that in reality, all the happy faces are exactly the same size. Nonetheless, some are drawn large, while others appear extremely tiny. To create this illusion of depth, I have used the following three different components of perspective:

- ✚ **Overlapping:** Some happy faces overlap (appear to be in front of) others. A noticeable clue is provided when a section of one seems to be missing. However, it's not really missing - the one in front of it is merely blocking your line of vision.
- ✚ **Size differences:** The smaller the happy faces appear to be, the farther they are away from you. The closer they are to you, the larger they look.
- ✚ **Arrangement:** The horizon line (not visible inside this drawing space) is above the happy faces. Those that are closest to you are not only larger, but also appear near the bottom of the drawing space. Those that are close to the top of the drawing space are the farthest away.

ILLUSTRATION 01-11



Objects give the impression of having disappeared when they get close to the vanishing point, but not like vanishing into the Bermuda triangle! Because something (or someone) is too far away to be seen doesn't mean it has actually disappeared. In fact, people and objects are simply too tiny to see when they are beyond your line of vision.

In the next drawing, the illusion of geometric perspective demonstrates how people appear to become smaller and smaller until they finally completely disappear into the vanishing point. Imagine that the striped lines are a bridge that extends all the way back to the vanishing point. People (and objects) on this bridge appear smaller and smaller the farther away they are.

Look at the outline of the largest man in relationship to the vanishing point. Use your imagination to visually draw two lines, one from the top of his head and the other from the bottom of his shoes, to the vanishing point. Take note that the space between these two lines becomes progressively smaller closer to the vanishing point.

ILLUSTRATION 01-12

The horizontal lines of his body (such as the locations of his elbows and knees) also follow the rules of geometric perspective and converge at the same vanishing point on the horizon line.

The illustrations below shows the perspective lines of two figures. One figure is close to the viewer and the second is farther away closer to the vanishing point.

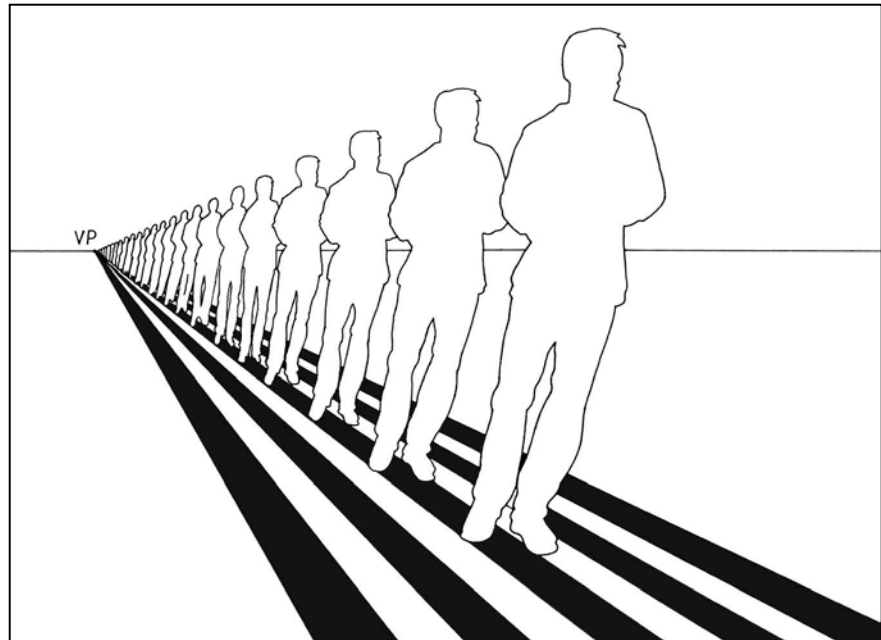


ILLUSTRATION 01-13

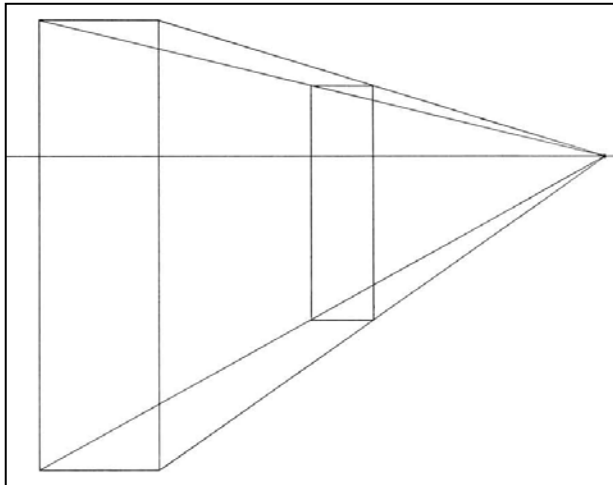
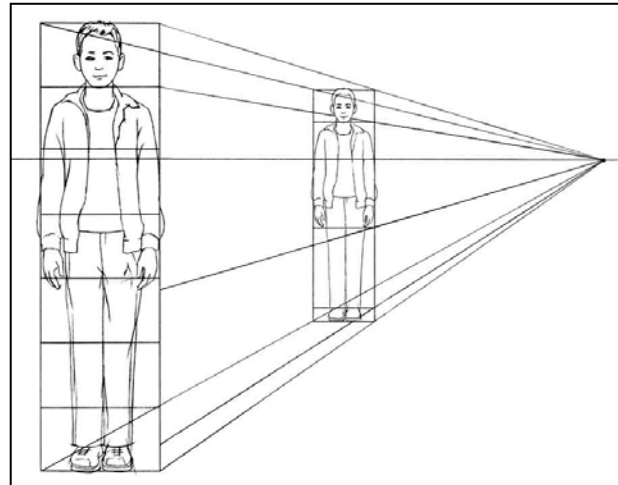


ILLUSTRATION 01-14



EXPANDING ON ELEMENTS OF PERSPECTIVE

Creating the realistic illusion of spatial depth in your drawings requires an understanding of more than geometric perspective. In this section, I discuss two more elements of perspective, which help artists construct the illusion of a third dimension on a two-dimensional surface.

FADING INTO DISTANT SPACE WITH ATMOSPHERIC PERSPECTIVE

Atmospheric Perspective (sometimes called aerial perspective) refers to the visual depth created by various particles in the atmosphere. The farther an object recedes into the distance, the lighter in value it seems to become, and its edges and forms appear more blurred.

Even on a clear day, your ability to see distant objects is decreased by an assortment of atmospheric components, such as minuscule particles of dust and/or pollen and/or tiny droplets of moisture. Your vision becomes further diminished when the atmosphere is filled with haze, fog, smoke, rain or snow. Even fairly close-up objects can appear out of focus or almost invisible under certain conditions.

Say hello to the Globs and their cousins, the Blobs! They are demonstrating how a heavy fog could affect your ability to see them. You can plainly see the crisp shading lines of Billy Blob (the shy one in the front center), who is the closest to you. However, the farther away they are from the foreground, the fewer details you can see. The Blobs and Globs in the distant space are barely visible at all!

ILLUSTRATION 01-15

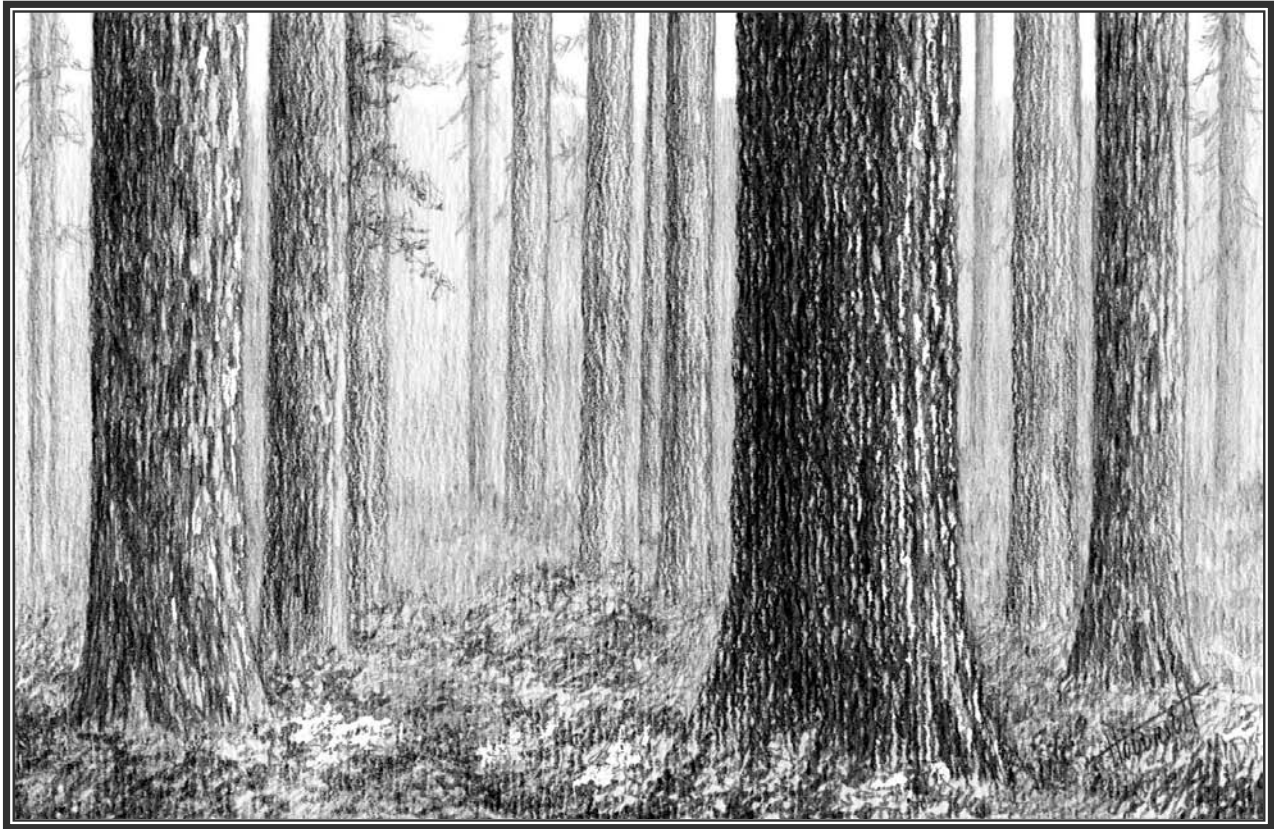


The next drawing demonstrates a combination of both atmospheric and geometric perspectives. As you examine this drawing, observe the following elements of perspective which provide the illusion of depth to the forest:

Atmospheric perspective: The trees in the front are drawn with more details and have more contrasting values than the ones in the distance. Their shadows are darker, and their highlights are brighter. Distant trees are lighter in value and less detailed.

Geometric perspective: trees closer to the foreground are larger than the ones farther back in the forest. In that the bases of the trees become progressively higher in the drawing, as they recede into the distance, indicates that they are below the horizon line.

ILLUSTRATION 01-16

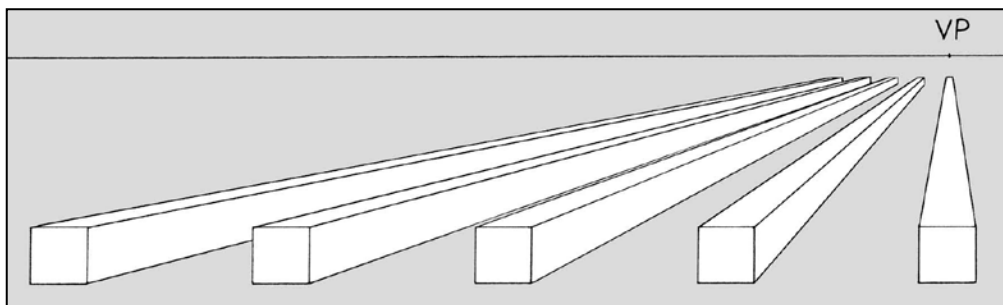


SHORTENING SUBJECTS WITH FORESHORTENING

Foreshortening refers to the visual distortion of a person or object, when viewed at severe angles. The level of distortion becomes more pronounced as the angle of viewing becomes more extreme. Basically, foreshortening creates the illusion that an object is much shorter than it actually is.

Foreshortened qualities become even more noticeable when long objects are viewed from an end. In reality, each of the boards in the next illustration is the exact same length. Yet, the boards toward the left seem to become progressively longer. Observe that the board directly under the vanishing point is the shortest of all; its end seems to point straight out toward you.

ILLUSTRATION 01-17



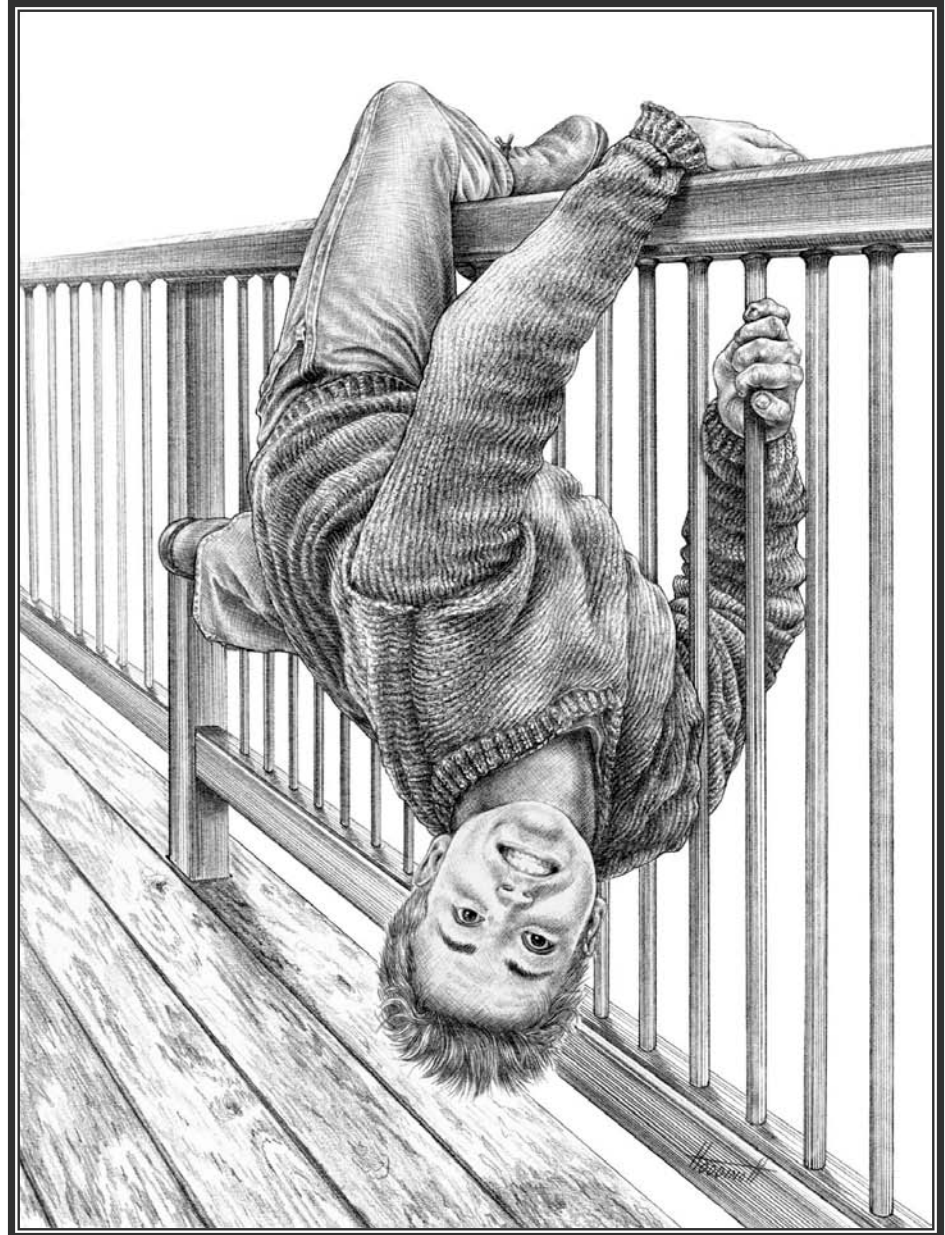
Foreshortening takes a little getting used to, but is an essential component of creating depth, especially in a drawing of a human figure. In this drawing my upside down friend, Rob, demonstrates an exceptional perspective on foreshortening.

ILLUSTRATION 01-18

I need to draw the extreme visual distortions to his body exactly as I see them, rather than the sizes and proportions that I actually know them to be. Otherwise, accurately rendering the three-dimensional illusion of this pose, on a two-dimensional drawing surface, would be impossible.

Observe that:

- ✚ His lower legs, upper right arm, torso, and right hand appear to be very short.
- ✚ Only his left arm and face appear to be their actual lengths.
- ✚ His right foot looks very tiny when compared to his right hand.



Keep in mind that all your drawings, especially representational renderings, become visually correct and more realistic with the utilization of various components of perspective.

BRENDA HODDINOTT - BIOGRAPHY

As a self-educated teacher, visual artist, portraitist, forensic artist, and illustrator, Brenda Hoddinott utilizes diverse art media including graphite, technical pen, colored pencil, chalk pastel, charcoal, conté crayon, and oil paints.

My philosophy on teaching art is to focus primarily on the enjoyment aspects while gently introducing the technical and academic. Hence, in creating a passion for the subject matter, the quest for knowledge also becomes enjoyable.

>Brenda Hoddinott<

Born in St. John's, Newfoundland, Brenda grew up in the small town of Corner Brook. She developed strong technical competencies with a personal commitment to self directed learning, and the aid of assorted "Learn to Draw" books. During Brenda's twenty-five year career as a self-educated civilian forensic artist, numerous criminal investigation departments have employed Brenda's skills, including Royal Canadian Mounted Police and municipal police departments. In 1992, Brenda was honored with a commendation from the Royal Canadian Mounted Police, and in 1994, she was awarded a Certificate of Membership from "Forensic Artists International".

Her home-based art career included graphic design, and teaching recreational drawing and painting classes. As supervisor of her community's recreational art department, Brenda hired and trained teachers, and designed curriculum for several children's art programs. In 1998, Brenda chose to end her eighteen-year career as an art educator in order to devote more time to writing, drawing, painting, and developing her websites.

Fine Art Education <http://www.finearteducation.com> and Drawspace <http://www.drawspace.com> incorporate her unique style and innovative approach to curriculum development. These sites offer downloadable and printable drawing classes for students of all abilities from the age of eight through adult. Students of all ages, levels and abilities have praised the simple step-by-step instructional approach. These sites are respected as a resource for fine art educators, home schooling programs, and educational facilities throughout the world.

LEARN-TO-DRAW BOOKS BY BRENDA HODDINOTT

Drawing for Dummies (2003): Wiley Publishing, Inc., New, York, NY, this 336 page book is available on various websites and in major bookstores internationally.

The Complete Idiot's Guide to Drawing People (2004): Winner of the Alpha-Penguin Book of the Year Award 2004, Alpha - Pearson Education – Macmillan, Indianapolis, IN, this 360 page book is available on various websites and in major bookstores internationally.