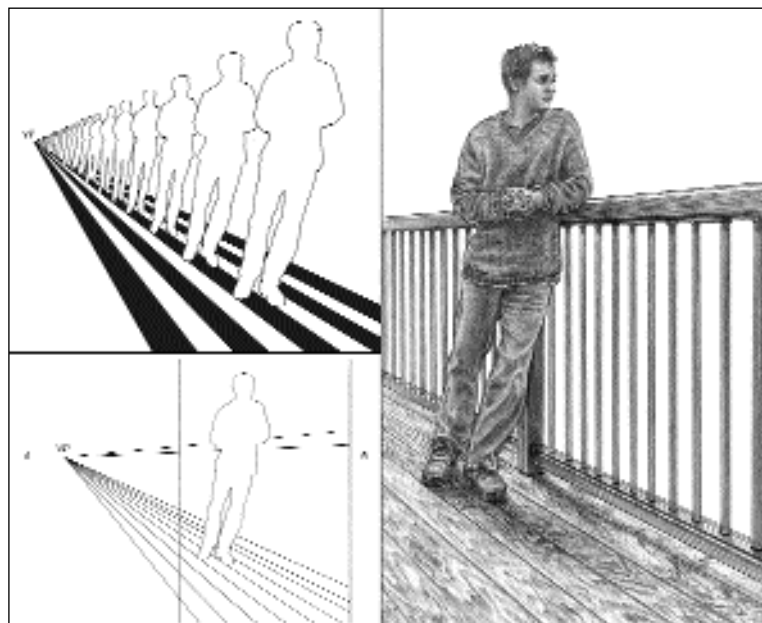


In This Chapter

- ◆ Explore and identify different perspectives
- ◆ Watching someone disappear into distant space
- ◆ Create the illusion of spatial depth with figures
- ◆ A unique perspective on foreshortening



Chapter 5

New Perspectives on People

The mysterious illusion of a third dimension on a flat piece of drawing paper is created with perspective. Perspective is the very foundation on which your compositions either stand or fall. A basic insight into perspective allows you to draw people, and various parts of people, visually correct and more realistic.

In this chapter, your perception of reality is about to be challenged! I show you how to identify some visual distortions of perspective and explain how to apply them correctly to your drawings. Simple perspective guidelines let you record the physical proportions of individuals as you actually see them, rather than as you know them to be.

Putting Everything into Perspective

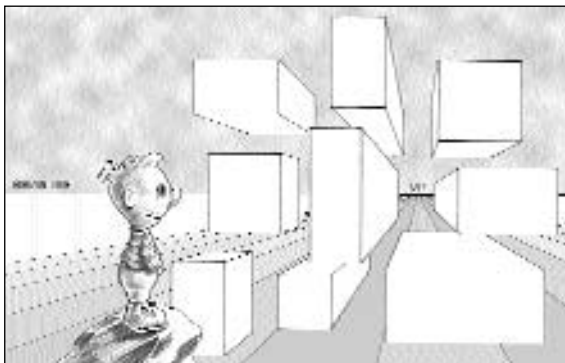
The farther away people or things are, the smaller they appear to be. Artists use geometric perspective (sometimes called linear perspective) to draw this illusion in such a way that their subjects seem to recede into distant space.

When you look straight ahead, an imaginary horizontal line known as the horizon line divides your line of vision. In essence, the horizon line and your eye level are one and the same. Wherever you move—from the top of the highest mountain to the lowest valley—your eye level always stays with you.

As an artist, you can create the illusion that the viewers of your drawings are above, below, or at eye level with the people and objects in your drawing. You determine the viewers' eye level by choosing the horizontal position of the horizon line.

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Examine the next drawing and pretend that you are the figure standing on the rock. The horizon line represents your eye level. Sections of objects (or people) that touch the horizon line are at your eye level. All things that are higher than your eye level are above the horizon line. Everything lower than your eye level is below the horizon line. If this were real life, you'd have to look upward to see the objects above the horizon line and look down to see those below.



Boxes float above, at, and below the horizon line, which is also the boy's eye level.

Perspective lines (invisible in real life) are straight, mostly angular lines, which extend from the edges of objects and people, back to the horizon line. An imaginary point on the horizon line, where perspective lines seem to converge, is called a vanishing point (marked VP in the previous drawing).

One-point perspective is the technique of using a single vanishing point to create the illusion of a straight-on view into distant space. The illustrations throughout this chapter show how one-point perspective creates the illusion of three-dimensional spaces, and transforms two-dimensional shapes (such as squares) into three-dimensional forms (such as cubes).



Info Tidbit

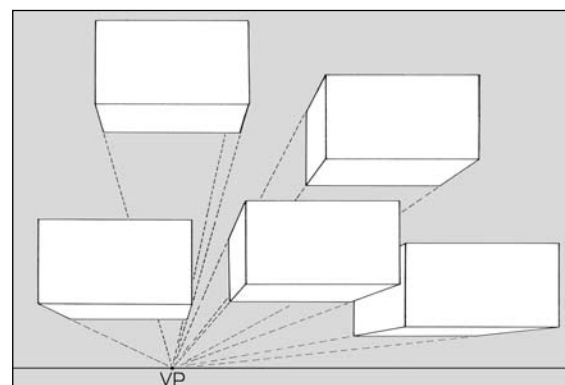
Everything and everybody at your eye level seem to touch the horizon line, and their perspective lines converge both downward and upward.

A Worm's Eye View from Below

People (or individual parts of people) that are above your eye level are above the horizon line. Their perspective lines converge downward to a vanishing point. If you want viewers to feel as though they are looking upward, you draw your subjects above the horizon line.

In the interest of simplicity, I use boxes to illustrate this concept. However, the same theory applies to a human figure when viewed inside an imaginary tall rectangle. Later in this chapter, I tell you more about human figures viewed in perspective.

In the next drawing, you are the viewer. The horizon line (your eye level) is straight ahead of you. However, you get the feeling that the boxes are all above you. You sense that you are below the cubes, looking up into the sky, at a bunch of kites or balloons. The perspective lines look like strings holding the boxes from flying away. Each perspective line converges at the same vanishing point (marked VP).

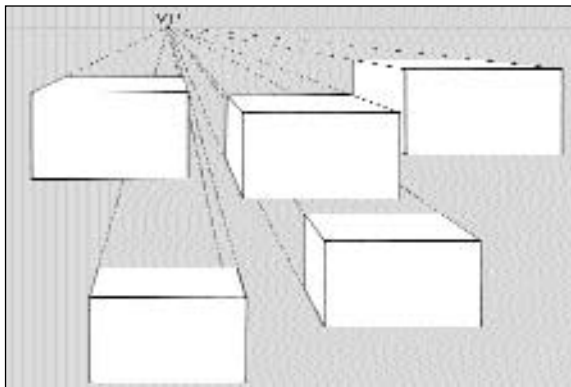


This worm's eye view has you looking upward at boxes above the horizon line.

A Bird's Eye View from Above

When you draw people and objects below the horizon line, you create the illusion that the viewer of your drawing is looking downward. The perspective lines below your eye level (horizon line) all converge upward.

As you look at the next drawing, imagine that you are standing at the top of a tall building or flying in a plane. Your eye level (the horizon line) is straight ahead of you, and you feel as though you are looking downward at the boxes. The horizon line is above the boxes, close to the top of the drawing space. The perspective lines angle upward toward the horizon line and converge at the vanishing point.



From a bird's eye view, you feel as though you are looking downward at these boxes.



Helpful Hint

When using geometric perspective, always draw the horizon line parallel to the upper and lower sides of a square or rectangular drawing space.

Drawing a Three-Dimensional Form

You can have some fun with one-point perspective in the following exercise. You draw a horizon line, a vanishing point, and use perspective lines to draw a simple box. Find a pencil, paper, eraser, and ruler, and follow along with me:

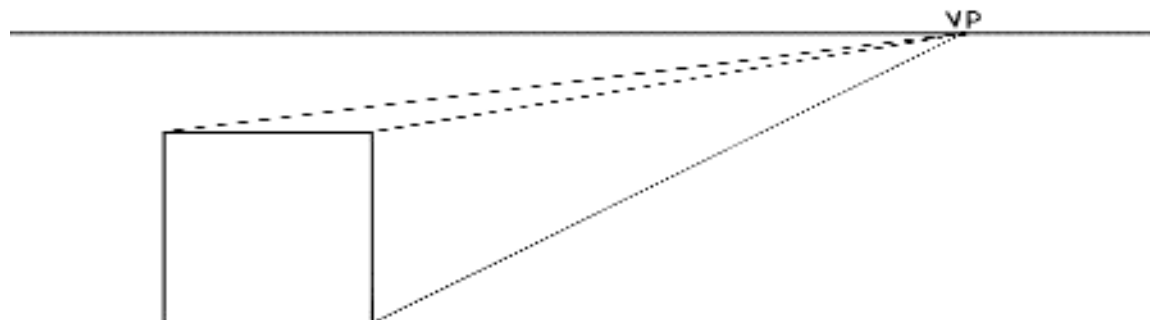
1. Use your ruler to draw a horizon line that is parallel to the top and bottom of a square or rectangular drawing space.
2. Add a small dot on the horizon line to represent the vanishing point. If you wish, you can mark it VP.
3. Draw a rectangle (or square) slightly below (or above) the horizon line. This rectangle or square represents the flat frontal face of a box and will be closer to the viewer than any of its other five sides. The horizontal lines need to be parallel to the horizon line. Both vertical sides need to be perpendicular (at a right angle) to the horizon line.

VP

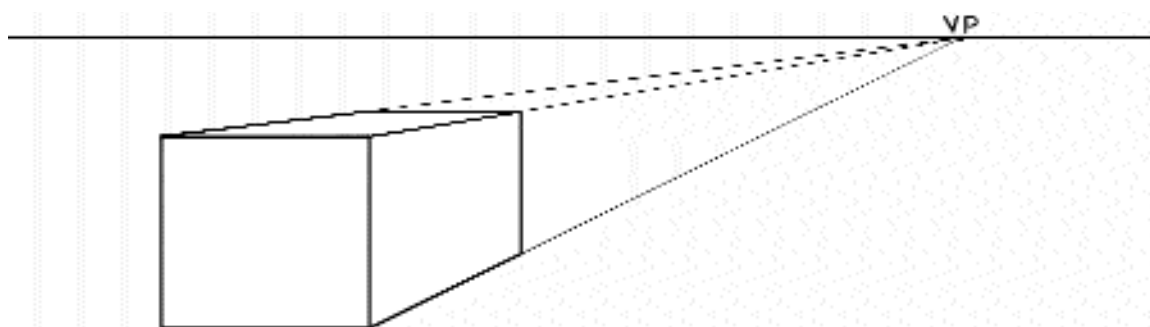


The rectangular shape represents the front side of a box. The letters "VP" identify the vanishing point on the horizon line.

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Straight lines connect three corners of the rectangle to the vanishing point.



This realistic box is accurately rendered with proper perspective.

4. Use your ruler to connect three corners of the rectangle to the vanishing point as in the drawing above. These three lines recede into space and converge at the vanishing point to identify the top and one side of the box.
5. Complete your drawing of a box by adding two more lines. The horizontal line at the top is parallel to the upper edge of the rectangle (and to the horizon line). The vertical line, representing the rear side edge of the box, is parallel to the sides of the rectangle (and perpendicular to the horizon line).

Moving People into Distant Space

Perspective challenges you to draw people, individual parts of people, and objects the size you actually see them, instead of the size you know them to be. Everything and everybody appears smaller the farther they are away from you. The closer they are to you, the larger they look.

Watching People Disappear

People seem to completely vanish when they get close to the vanishing point, but not like disappearing into the Bermuda triangle! Because someone is too far away to still be in your line of vision doesn't mean he or she has actually disappeared. They simply become too tiny to see.

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Think of the stripes in the adjacent drawing as a bridge extending from the foreground all the way back to the vanishing point (VP). Consider each figure standing on this bridge to be the exact same size. Note the following illusions of geometric perspective:

- ◆ The dark stripes become narrower, and the spaces between them are smaller, the closer they are to the vanishing point.
- ◆ The outlines of the figures appear to become smaller, until they finally seem to disappear into the vanishing point.
- ◆ The figures appear closer together the nearer they are to the vanishing point.

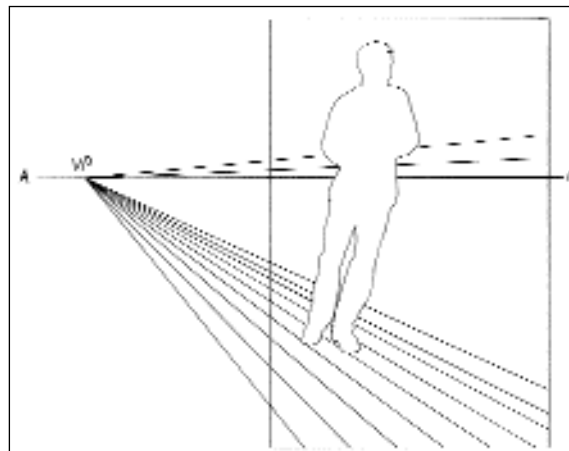
Look at the outline of the largest man in relationship to the vanishing point:

- ◆ Imagine a line extending from the top of his head back to the vanishing point. The tops of the heads of each man behind him are also touching this same line. Note that the upper section of each figure is above your eye level (the horizon line).
- ◆ Pretend a second line goes from the bottom of his shoes to the vanishing point. The bottoms of the shoes of all the other men are also along this line. Observe that the lower sections of all the men's bodies are below the horizon line.
- ◆ An imaginary line drawn through his waist (and the waist of each of the other men) to the vanishing point would be on the horizon line (at your eye level).
- ◆ The horizontal locations of all other parts of his and all other bodies, such as shoulders, elbows, and knees, also converge at the same vanishing point.



The figures in this long lineup appear smaller the closer they are to the vanishing point.

The next simple line drawing of a figure leaning on a railing is rendered with one-point perspective. All the edges of the boards on the deck, and the horizontal metal railings, extend back to the exact same vanishing point on the horizon line.



The lines of the deck and railings all converge at the same vanishing point.

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Warm Fuzzy

Be patient with yourself! Your abilities to render perspective accurately will improve with practice and will eventually become instinctive. Careful observation of people and objects around you expands your understanding of perspective.

The next detailed drawing of a male figure, standing on a wooden deck, illustrates a practical application for the illusion of geometric perspective.

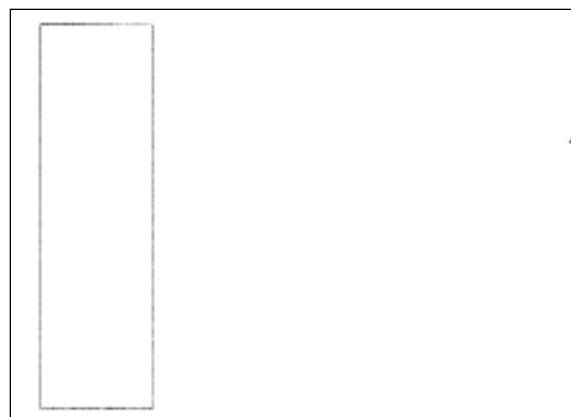


My friend Rob is leaning on a railing and standing on a deck, realistically rendered with geometric perspective.

Receding into the Distance

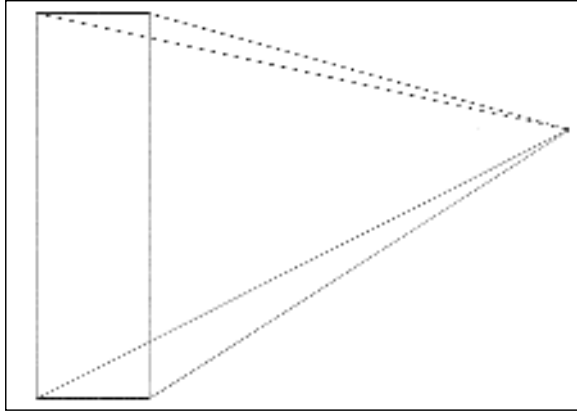
When drawing two or more figures standing (or sitting) in the same drawing, you often want to draw one farther away than the other. Perspective can help you draw those figures proportionately correct to one another. Drawing people with perspective is as easy as drawing rectangles or squares. Follow these steps:

1. Outline a horizontal, rectangular drawing space, approximately 11 inches wide by 8 inches high.
2. Draw a horizon line in the upper half, and add a vanishing point on the far right.
3. Draw a vertical rectangle 7 inches tall by 2 inches wide. Both vertical sides need to be perpendicular (at a right angle) to the horizon line. The top and bottom is horizontal. This box represents a standing figure who is 7 units tall by 2 units wide. (You can explore the proportions of figures of all ages in Chapter 17.)



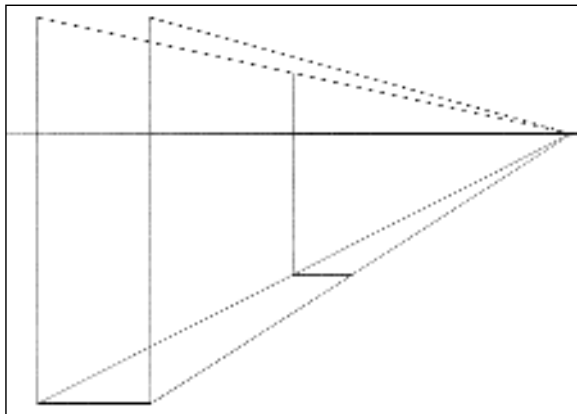
A vertical rectangle represents a standing figure.

4. Use your ruler to connect each corner of the rectangle to the vanishing point.



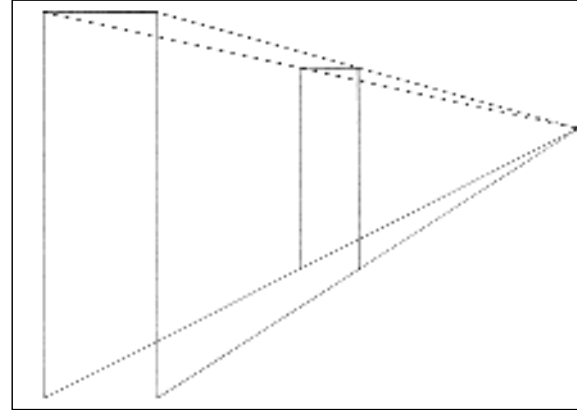
A line connects each corner of the rectangle to the vanishing point.

5. Draw a vertical line connecting the two inner perspective lines. The closer to the vanishing point you draw this line, the smaller the figure will be, and therefore the farther away from the first figure.
6. Draw two horizontal lines connecting the top and bottom of this vertical line to the two outer perspective lines.



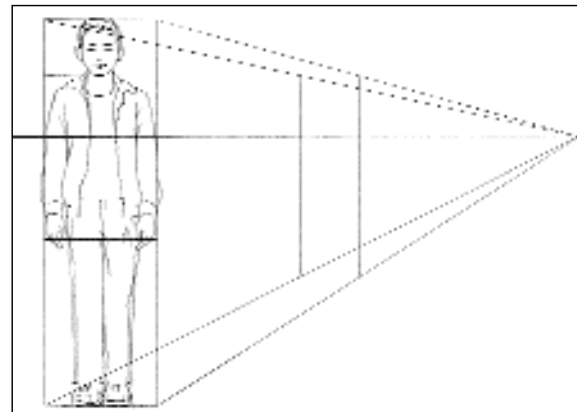
Plot the position of the second rectangle using the perspective lines.

7. Complete your drawing of the second rectangle with another vertical line connecting the two outer perspective lines.



A second rectangle indicates the size of the second figure.

8. Measure and divide the height of the larger rectangle into seven equal sections.
9. Draw a figure in the larger rectangle. Sketch the head in the top section and add the body in the other six.

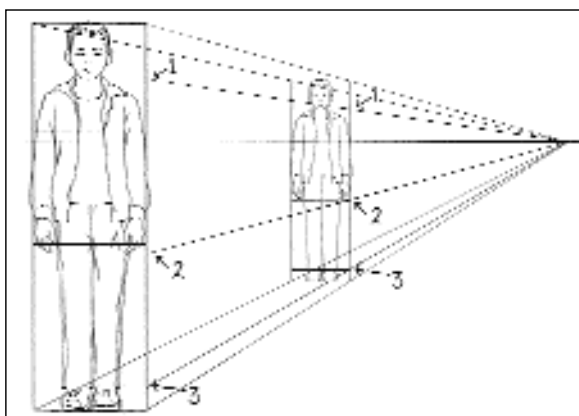


The standing figure of an adolescent boy fits into this rectangle perfectly.

10. Draw straight lines back to the vanishing point from the three distances indicated, the bottom of the chin (1), the tips of the fingers (2), and the bottom of the pants (3). (Refer to the next drawing.) In essence, you can pick any parts of the first figure and plot their positions in the second rectangle in the same way.

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11. Draw a second figure in the smaller rectangle.



By plotting perspective points, a second figure farther away is drawn proportionately correct.

Foreshortening Figures

Foreshortening refers to the visual distortion of a person or object when viewed at extreme angles. The parts of a figure that are farther away from you look disproportionately small when viewed at an extreme angle. As the angle of viewing becomes more extreme, the level of distortion becomes more pronounced.

Foreshortening takes a little getting used to but is a critical component of creating depth in a drawing of a human figure. Foreshortening can make whole bodies, or just some parts of a body, look shorter than they really are. Long parts of a body, such as arms or legs, can look incredibly short when viewed from an end. Drawing this distortion correctly is the key to making drawings of figures look realistic.

The long boards in the next drawing are all the exact same length. Basically these boards can represent any human figure or part of a person, such as arms or legs. Observe how short they appear when viewed at extreme angles (from the ends).

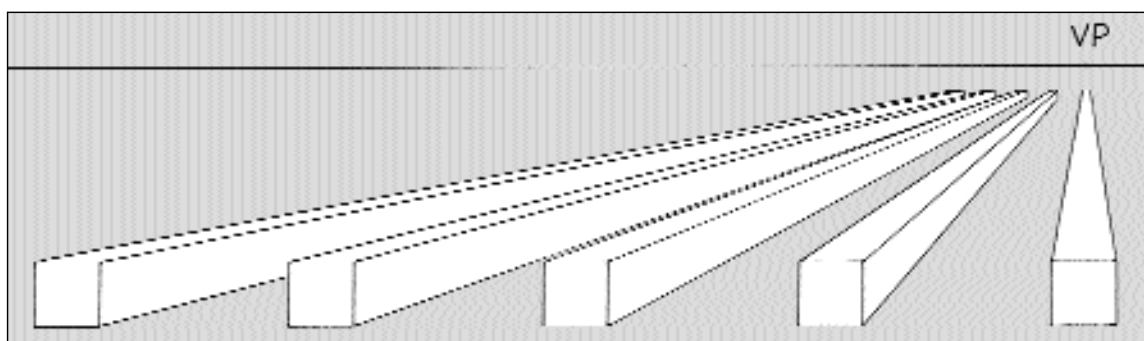


Helpful Hint

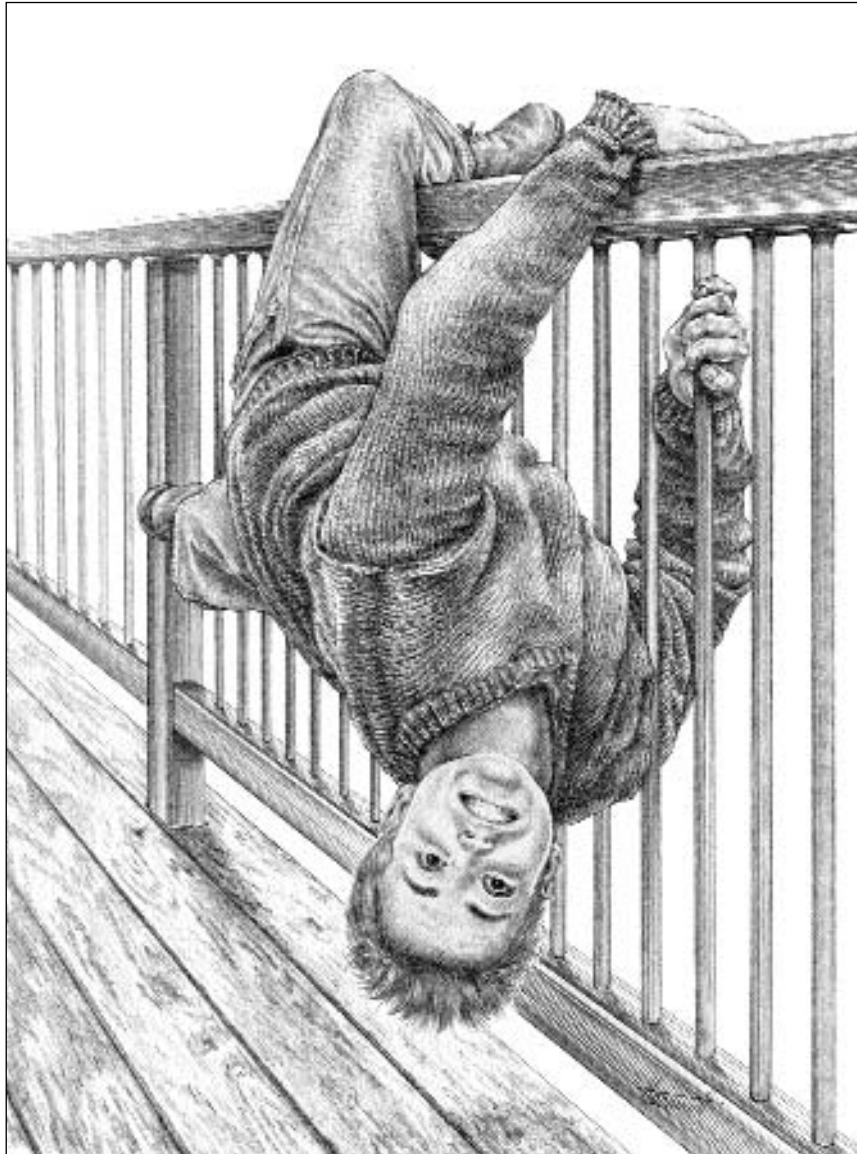
Find opportunities to view people from extreme perspectives in real life.

You can even lie on the floor and have a friend or family member (the taller the better) stand beside you. As you look up at the person, note that ...

- ◆ The person's head will look especially tiny.
- ◆ His or her legs and feet look disproportionately large.
- ◆ The entire body looks much shorter than it actually is.



As objects of the same length are viewed from progressively extreme angles, the shorter they appear to be.



Resist the urge to turn this book upside-down as you view this unique perspective on foreshortening.

To draw foreshortening correctly you need to see parts of a body as they really appear, rather than as you know them to be. In other words, you need to trick your brain, which is conditioned to seeing people in certain ways. For example, when people look at the above drawing, many instinctively tilt their heads to see this person right side up. Your brain simply isn't used to seeing people from an upside-down perspective.

My friend Rob is of average height and his body is well-proportioned. He is posed in an unusual position to demonstrate the importance of drawing foreshortening correctly. His body is being viewed from an end and therefore appears to be disproportionately short. Foreshortening also creates extreme visual distortions to the sizes of various parts of his body. Only his left arm and head appear to be their actual lengths.

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A basic understanding of foreshortening allowed me to draw this pose visually correct. I simply drew the following visual distortions exactly as I saw them:

- ◆ The lower section of Rob's left leg is drawn very short. I only drew the foot and ankle area of his right leg, because the rest was out of my line of vision, behind his torso. In fact, Rob's legs are in perfect proportion to his body.
- ◆ His right arm is drawn very short, because I was viewing it at a much more extreme angle than his left (which seems to be its actual length). In reality, both of Rob's arms are the same length.
- ◆ Rob's torso is in fact much longer than I have drawn it, but appears shorter because of the extreme angle from which I was viewing his body.
- ◆ I drew his right foot very tiny because it was farther away from me than any other part of his body. For fun, compare its size to that of his right hand (which was closer to me than his foot). Rest assured that in reality his feet are bigger than his hands and both are the same size!

The Least You Need to Know

- ◆ Perspective allows you to draw people visually correct and more realistic.
 - ◆ The farther away people (or their various parts) are, the smaller they appear to be.
 - ◆ The horizon line and your eye level are the same thing. Draw the horizon line parallel to the upper and lower sides of a square or rectangular drawing space.
 - ◆ Objects at your eye level seem to touch the horizon line, and their perspective lines converge both downward and upward.
- ◆ Objects above your eye level are above the horizon line and their perspective lines converge downward; angular lines of objects below your eye level (below the horizon line) converge upward.
 - ◆ Long parts of a body, such as arms or legs, look disproportionately short when viewed from an end.