

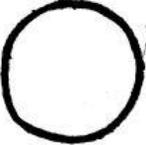
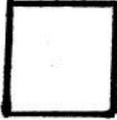
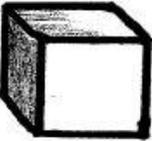
College Guild
 PO Box 696, Brunswick, ME 04011

FUNDAMENTALS OF DRAWING

Unit 2 of 4

Perspective Drawing and Elements of Shading

For many drawings, lines and shapes are all you need to make a complete drawing. However, if you want your subject to look realistic and three-dimensional, you need to give your drawing “volume” or “depth”. The piece of paper you’re drawing on has two dimensions – height and width. Drawing realistically is about creating the illusion of a third dimension - - depth, sometimes called volume - - on a two-dimensional piece of paper. This is how you can turn a circle into a sphere, a square into a cube, or a triangle into a cone as you see here:

Circle	Square	Triangle
		
Sphere	Cube	Cone
		

To create the illusion of depth, you will use the skills of “perspective” and “shading”. When you draw objects with perspective, you can make them recede into space in a believable way. When you draw the light, shadows and reflected light on and around objects correctly, you make them look even more realistic.

Perspective is basically the way objects and spaces appear from a particular point of view. In order to understand the basic fundamentals of drawing in perspective, you’ll need to learn a few new terms:

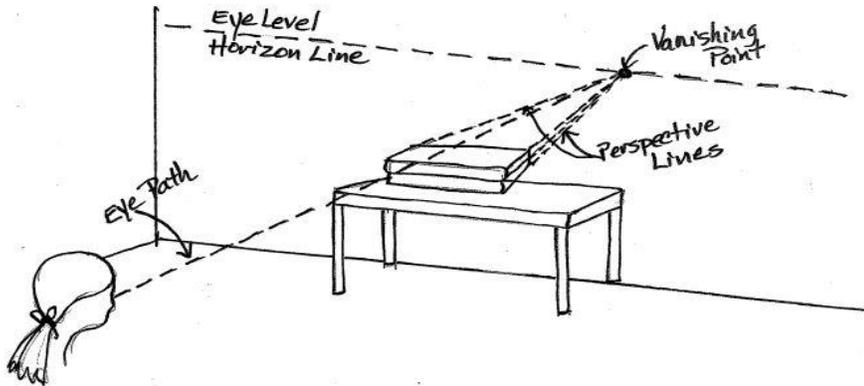
Horizon: If you were outside, the “horizon” would be the line at which the sky meets the land, or the sky meets the ocean. Regardless of your point of view, or your eye level, the horizon would be defined this way and it’s generally a distance away from you. The horizon can also be applied inside. Simply, **it’s the spot in space you see when you’re looking straight ahead at your eye level.** The horizon, whether inside or outside, is a **STRAIGHT** horizontal line that extends to each side to infinity.

Perspective Lines: These are **STRAIGHT** lines that appear to converge at a point on the horizon line. They help establish guidelines for drawing objects in proper perspective.

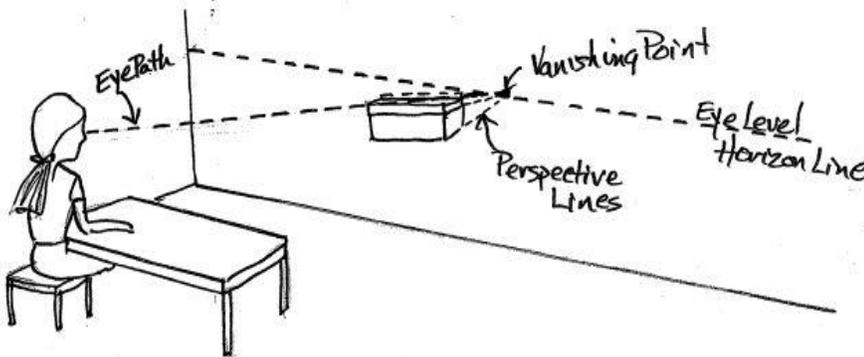
Convergence: The appearance that two or more receding parallel lines will eventually meet is what we mean by convergence. Imagine standing on a railroad track. You know they're parallel, but still the tracks seem to get closer and closer together as they recede in space. In other words, they "converge" at a specific point.

Vanishing Point: The vanishing point is the point on the horizon line where perspective lines converge.

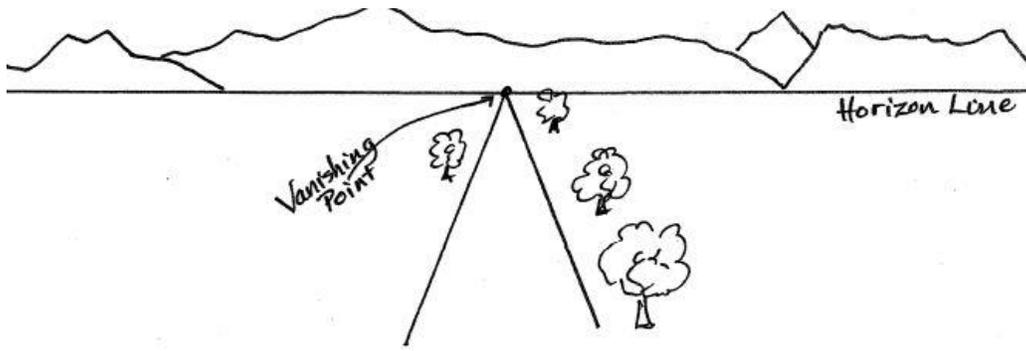
Here's an example of standing up, looking straight ahead, but with the objects below your eye level, or horizon:



Here's an example of sitting down, looking straight ahead at objects that fall at your eye level, on the horizon line:



Keep in mind that it doesn't matter if you're standing or sitting. The horizon will always be at your eye level looking straight ahead. Check out this drawing of a road that seems to disappear into the distance, ending at the horizon at what is called the vanishing point.



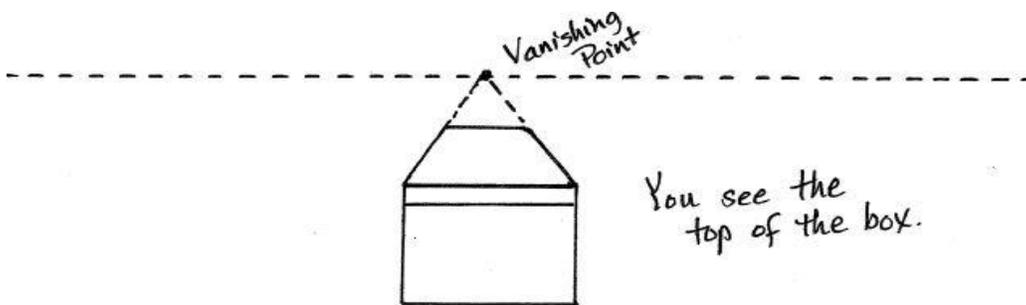
In every perspective drawing you create, you as the artist must determine the viewer's eye level by choosing the position of the horizon line. Remember, this can be an indoor drawing as well as a landscape. You control whether you want your viewers to feel like they're looking at the objects in your drawing from above, from below or straight on. To do this, **ALWAYS** begin by lightly drawing a horizon line. Make sure it's parallel to the top and bottom of your paper. Then you can place your subjects around that line based on the perspective you want to create.

If you want the viewers of your drawing to feel like they are:

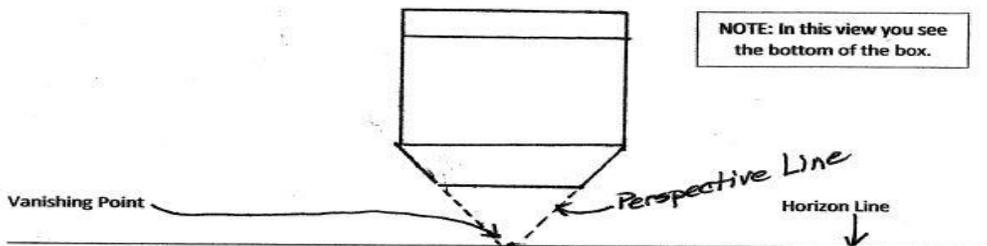
- Looking downward: Draw the subjects **BELOW** the horizon line.
- Looking upward: Draw the subjects **ABOVE** the horizon line.
- Looking straight on: Draw your subjects so that they touch or cross over the horizon line.

Here are some boxes drawn all three ways:

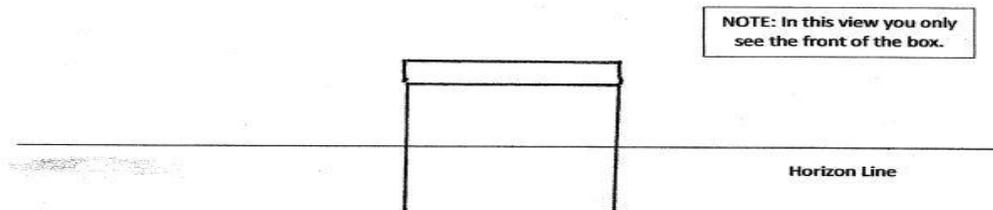
Below the horizon line:



Above the horizon line:



Crossing, or on, the horizon line:



Here are some basic rules of perspective drawing:

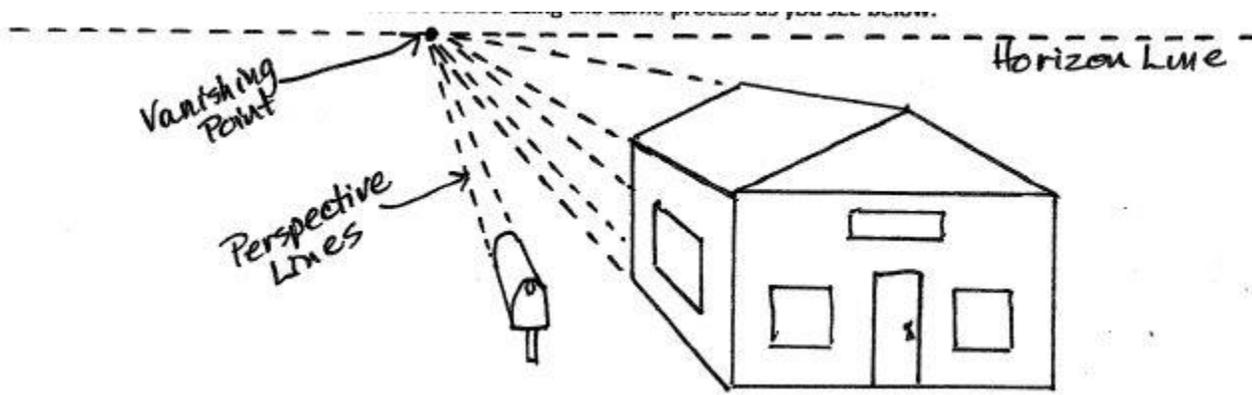
- All vertical lines will always remain vertical
- When looking at an object directly (not from an angle) horizontal lines will remain horizontal
- Perspective lines will move toward the vanishing point on the horizon line regardless of whether they're above or below the horizon line.

On this page you'll see how an artist might draw a very simple house below the horizon line step by step. Follow each step carefully. Note that the perspective lines are drawn in dotted lines.

Step	
Draw the horizon line with a vanishing point	
Draw two vertical lines a couple inches apart below the horizon line	
Connect the tops and bottoms of the two vertical lines (sides of the box) to the vanishing point with dotted lines (these are perspective lines); draw a 3 rd vertical line to identify the rear of the house; draw two horizontal lines to form the front of the house	
Add a door and two windows to the front of the house; draw over the dotted lines from the side of the house to the new vertical line you drew in the previous step to make those lines solid.	
To identify where the roof peak should be, draw an X in the front of the house; then go straight up from the center of the X to find a point	
Add the front of the roof by connecting the peak to the left and right front sides of the house; then connect the peak to the vanishing point with a perspective line; draw a line from the rear vertical line to the line you just drew from the peak to the vanishing point.	
Erase all the lines that you no longer need – you've drawn a house in perspective!	

Exercise #1: Draw a house of your own design that crosses the horizon line instead of being below it. Each step will be the same other than the position of the house crossing instead of below the horizon line. The vanishing point should be at the same place as the drawing above.

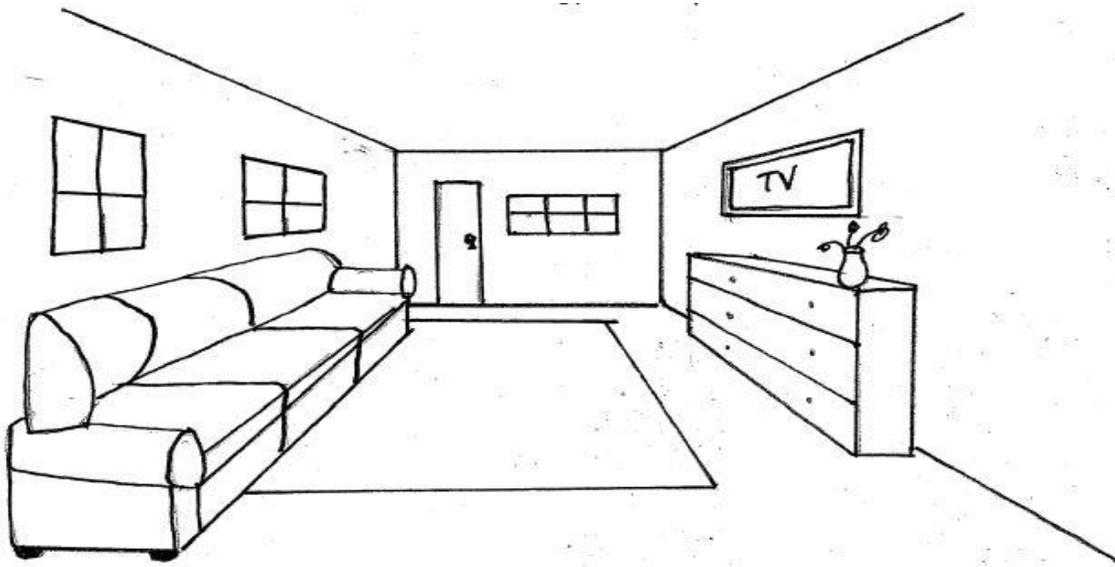
Other items such as a mailbox can be added using the same process as you see below.



Exercise #2: With a new piece of paper, draw a landscape that includes a building, some trees, maybe a mailbox, and any other items you would like to add.

Does all this perspective information seem a bit overwhelming? That's completely normal. It is a bit complex at first, but if you're patient with yourself, all you'll need is a bit of time and some practice. Remember – out of the perfectionist mode and into the practice mode!

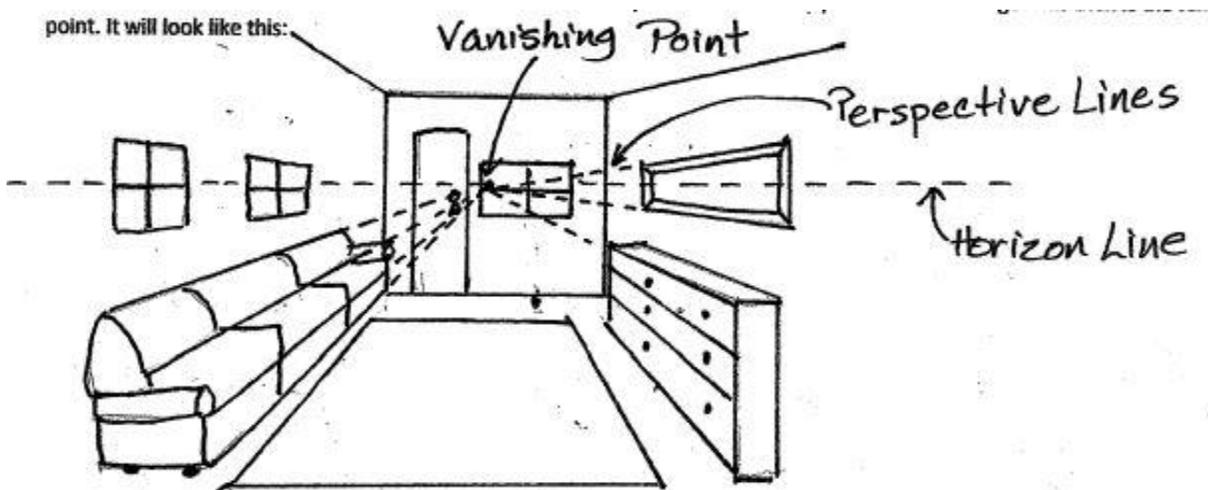
As much as possible, looking at pictures, paintings, photos and drawings others have made, and then identifying the horizon line and the vanishing point, can help you understand this better. Here's a drawing of a living room with normal furniture. How would we find the horizon line and vanishing point in this picture?



Since this isn't an outside landscape, obviously you don't see where the land meets the sky. However, you can still find the horizon with these steps:

1. Pick an object in the image that has at least one set of parallel lines that recede into space. In this image, you could pick out the tops and bottoms of the TV and windows on the walls, as well as the sofa under the windows. You could also pick out the ceiling and floor receding to the corner of the room. You can see that all of these lines are parallel, but you can also tell they appear to start to converge as they recede, right? Find a horizontal line that's precisely horizontal, not on a slant at all. Did you identify the bottom of the TV on the right side above the chest of drawers? Great! This line, perfectly horizontal, is therefore the horizon line.

2. Take a straight edge – a ruler, the edge of a book or notebook, even a piece of paper folded, for example – place it against the bottom of the painting and draw a line across the room. Now place your straight edge against the other perspective lines (remember, the perspective lines are not vertical or horizontal) and see where they all start to converge. This then is the vanishing point. It will look like this:



Exercise #3: Write a short paragraph describing your feelings and thoughts as you've been exploring the concepts of drawing in perspective and training your eyes to see the different aspects of perspective.

Exercise #4: Draw either a landscape or the interior of a room that has all four elements in it (horizon line, convergence, perspective lines and vanishing point). Make sure you have at least three to five different objects in your drawing.

Shading

We mentioned shading before as another way artists make their drawings appear to be three-dimensional. In order to shade things correctly, you need to understand the concept of "value". Value simply defines how light or dark something is. Think of a scale from one to ten with one being white and ten being black. Between those two extremes are almost an infinite number of values from the lightest lights to very dark. How are these values created? Simple – by the intensity and direction of the light that is hitting the objects in your drawing. Here are four balls (perfect circles or spheres), each with the light shining on them from a different direction:

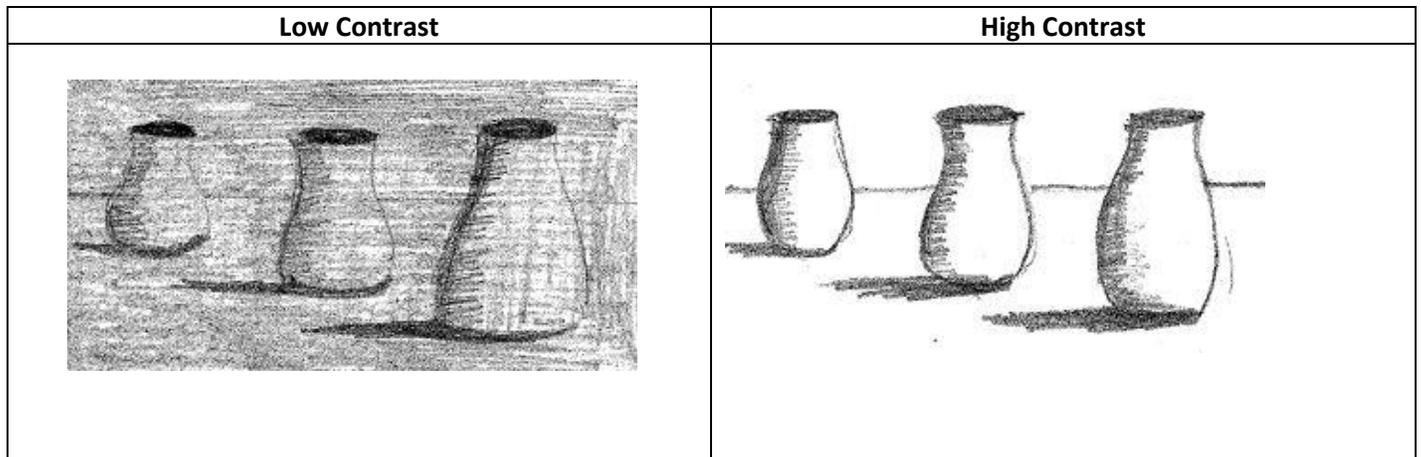


These spheres were shaded with a #2B pencil, but you can use any pencil. You can achieve this same look by shading with the side of your pencil rather than with the point. You can also use the tip of your finger to lightly rub your shading after applying it to make it seem even more smooth and soft.

Exercise #5: Draw four pears and shade them with light coming from the same four directions as above.

Contrast

Another term artists use is “contrast”. Contrast refers to the difference in values. For example, something black beside something dark gray would have less contrast than something black beside something white. Understanding contrast and how to use it to create the image you want to create is a technique you’ll want to develop. It will help you to highlight those areas on your drawing that you want the focus to be on. That object, or those objects, are known as the “focal point”. For example, if you were drawing someone’s portrait, and you had the person being drawn sitting at a table with two chairs and a bouquet of flowers on the table, you’d want the person to be the focal point, not the chairs, table or flowers. Check out these two drawings and ask yourself if the one with higher contrast catches your eye more than the one with lower contrast:



Notice in these drawings, that on the left, with low contrast, everything blends together and nothing really becomes very interesting. With higher contrast, on the right, the same three objects become much more interesting. By adding additional shading, the viewer also knows that the light is shining from the right side of the urns.

Low contrast can be any combination of these:

1. Light shades with other light shades
2. Medium shades with other medium shades
3. Dark shades with other dark shades

High contrast can be any combination of these:

1. Light shades with medium shades
2. Light shades with dark shades
3. Medium shades with much darker shades

Here are some questions to ask yourself that will help you make shading decisions as you look closely at the object or objects you're planning to draw:

1. Where do the darkest darks fall?
2. Where do the lightest lights fall?
3. How many shades do I see in between?
4. What is the lightest overall object or surface in the scene?
5. What is the darkest overall object or surface in the scene?
6. How can I use contrast to draw the viewer's eye toward my chosen focal point?
7. How can I create contrasting shades at the edge of my objects so that I can eliminate the lines around those edges?

Exercise #6: Select something handy – your shoe, a book, a clock, just about anything. Place it on a flat surface and notice where the light is coming from that hits it. Draw the object and then shade it so that the viewer immediately understands from where the light is coming.

Congratulations! You've completed the 2nd unit in this drawing course. Don't wait for the next unit to arrive – using the terms and processes you've just learned, keep practicing!