

**BASIC TYPES OF PERSPECTIVE ACCORDING TO FORMATION**

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**Abstract:** *In order to ensure students' quality mastery of the science of perspective, this article differentiates and illuminates the types of perspective according to its formation.*

**Key words:** *Perspective, binocular vision, monocular vision, one-point perspective, two-point perspective, three-point perspective, "bird's eye", "worm's eye".*

Perspective Drawing is a technique of space manipulation that consists of drawing three dimensional images on a two-dimensional surface. Perspective is what gives a three-dimensional feeling to a flat image such as a drawing or a painting. In art, it is a system of representing the way that objects appear to get smaller and closer together the farther away they are from the viewer. The purpose of perspective drawing is to learn to create three dimensional forms from a vanishing point. Perspective is key to almost any drawing or sketch as well as many paintings. It is one of the fundamentals that you need to understand in order to create realistic and believable scenes. There are four parts of a perspective drawing: the horizon line, vanishing point, orthogonal lines, and three dimensional forms.

Perspective can be used to depict depth and volume and to give your visual work a convincing three-dimensional appearance of space. Perspective is one of the key principles of drawing, and better understanding of it will markedly improve your drawing skills.

Most commonly, artists use perspective to depict realistic three-dimensional spaces. However, perspective can do so much more than simply express reality. You can use perspective tools to bring to life unreal, exaggerated, and physically impossible subjects that could never exist in real three-dimensional space. This makes perspective a versatile tool for visual expression that can open doors to your imagination and expand your creative possibilities.

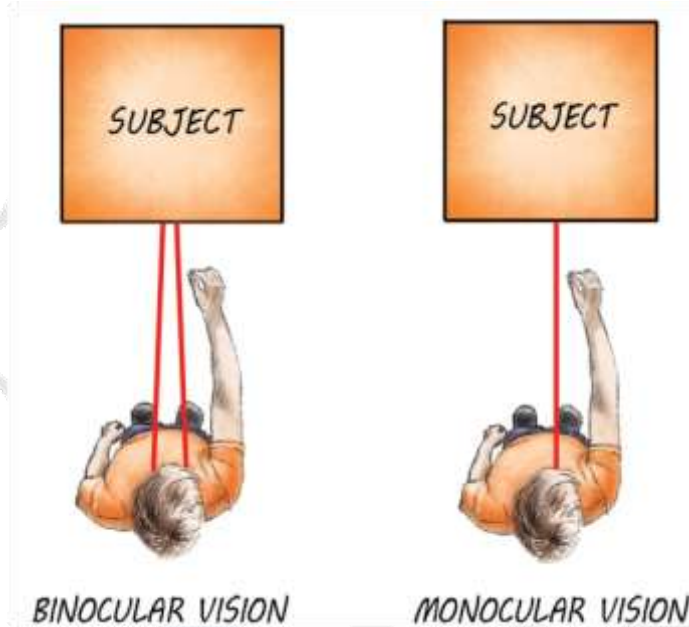
Linear perspective is a geometric method of depicting three-dimensional subjects on a two-dimensional format. Linear perspective creates the illusions of depth and dimension by modeling monocular vision. Monocular vision describes how one eye perceives depth. Binocular vision describes how both of our eyes in combination perceive depth.

## THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

### VOLUME-4, ISSUE-2

Linear perspective operates on three basic principles that summarize how we perceive depth through monocular vision: diminution, convergence, and foreshortening. Together they create the observable phenomenon that constitutes linear perspective. When receding forms appear increasingly smaller, we call that diminution.

Parts of a perspective drawing: perspective consists of four parts: 1. the horizon line, 2. the



vanishing point, 3. orthogonal lines (diagonal, vertical, and horizontal lines); and 4. three-dimensional forms.

Horizontal lines, such as the top edge and bottom edge of a building (or any other type of cube) will vanish somewhere on the horizon. A horizon line usually defines the ground plane. You can place the horizon line anywhere on the page, and the vanishing point anywhere on the horizon line. Neither has to reside within the compositional frame, or boundaries, of the final drawing.

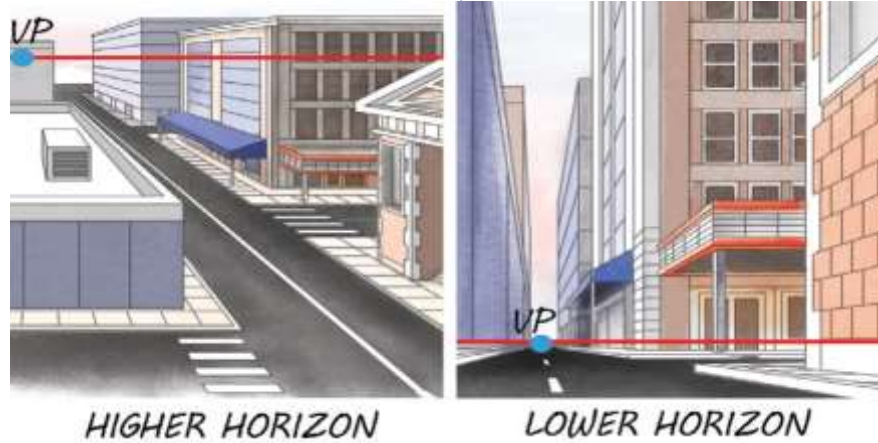
Carefully consider placement, because the position of both the horizon line and the vanishing point affects the angle of view. For example, a higher horizon line and vanishing point gives an aerial vantage of the top of the subject. Whereas placing the horizon line and vanishing



point lower in relation to the subject is better for a ground-level view.

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## VOLUME-4, ISSUE-2



Vertical lines, such as the upright edges of a building or the trunks of trees, vanish above or below the horizon.

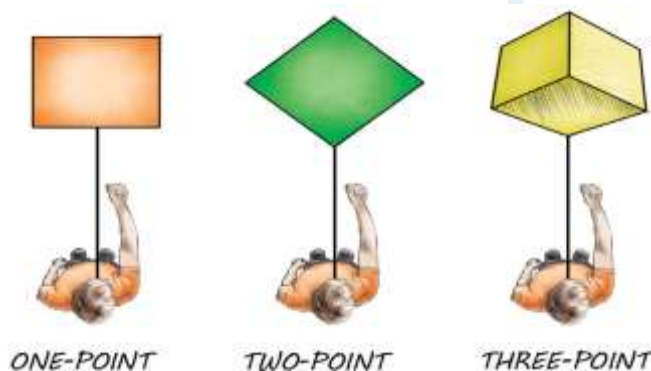
Frequently, vanishing points may be outside the picture. This can require a large work surface and a long ruler to figure out.

All parallel objects, such as multiple buildings on a street, share the same vanishing point.



If the station point, the center of vision, or the subject moves, the point of view changes. In observable linear perspective, a point of view will always be one of three major types: one-point perspective, two-point perspective, or three-point perspective. Without even taking a step in a new direction, simply shifting the viewer's gaze can alter a two-point perspective view into a three-point perspective view.

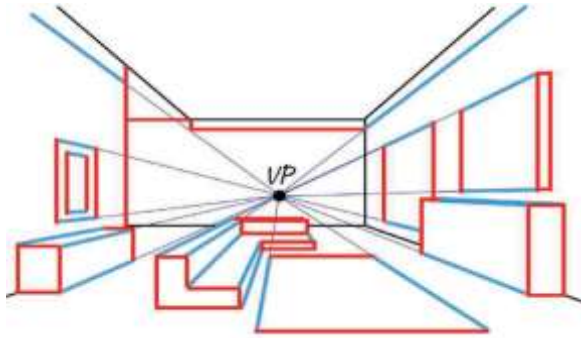
Three basic types of perspective - one-point, two-point, and three-point - refer to the



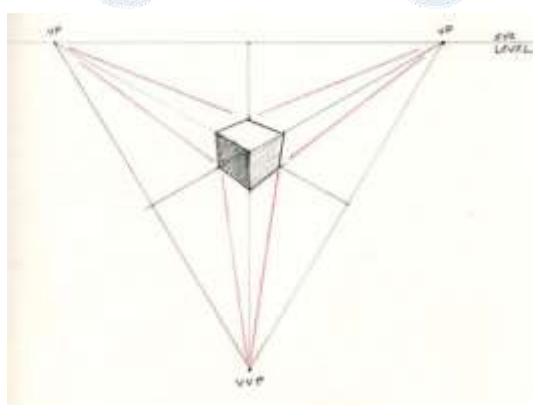
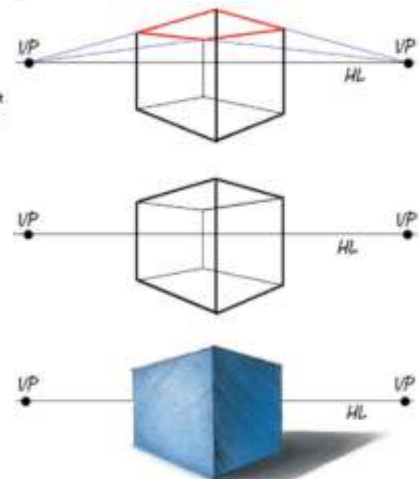
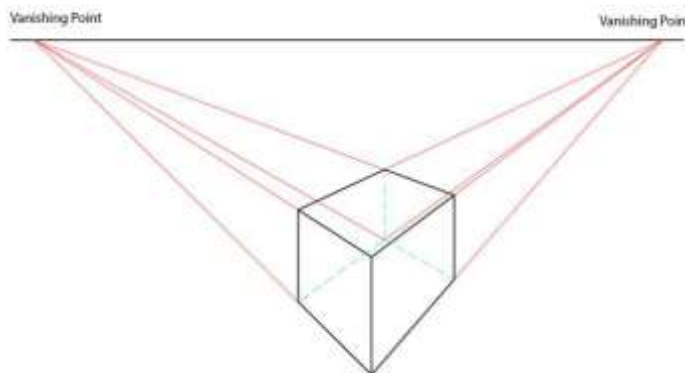
number of vanishing points used to create the perspective illusion. Two-point perspective is the most commonly used.

**One-point perspective.** Drawings have a one-point perspective when a single vanishing point (VP) seats on the horizon line. The position of the vanishing point can vary in its horizontal

location, but it always stays on the horizon line. Therefore, draw the horizon line first, then determine the VP position on it.



**Two-point perspective.** A drawing has two-point perspective when it contains two vanishing points on the horizon line. In an illustration, these vanishing points can be placed arbitrarily along the horizon. Two-point perspective can be used to draw the same objects as one-point perspective, rotated: looking at the corner of a house, or at two forked roads shrinking into the distance.



**Three-point perspective.** Three-point perspective is often used for buildings seen from above (or below). In addition to the two vanishing points from before, one for each wall, there is now one for how the vertical lines of the walls recede. For an object seen from above, this third vanishing point is below the ground. For an object seen from below, as when the viewer looks up at a tall building, the third vanishing point is high in space.

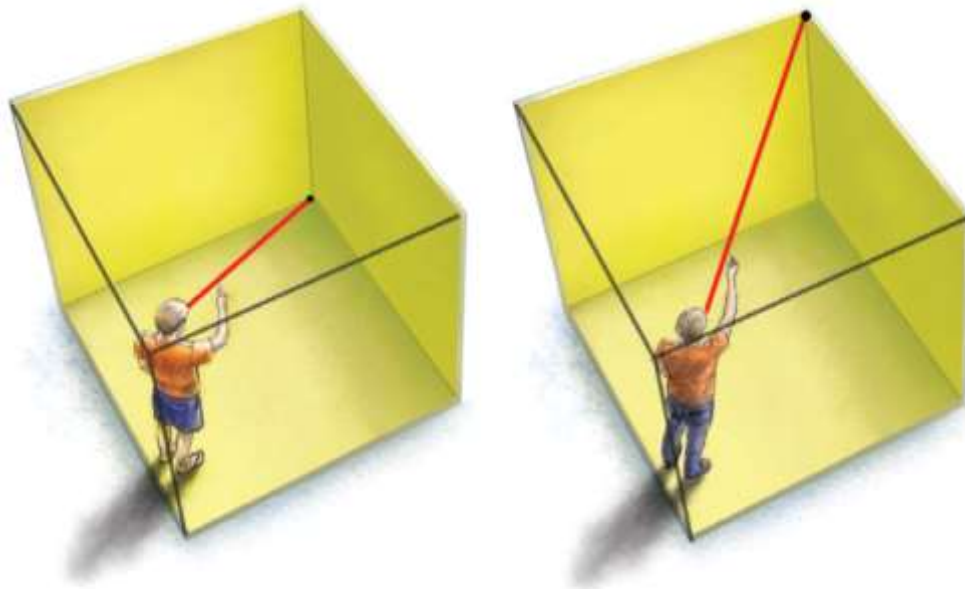
## THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

### VOLUME-4, ISSUE-2

A horizon line and vanishing point above the subject shows the topside, while a horizon line and vanishing point below the subject reveals the underside. Also a vanishing point to the right of the subject reveals a view of the left side and vice versa. Remember that a horizon line is always optional in perspective. Omitting the horizon allows for creative placement of the vanishing point. Points of view like a “worm’s-eye” (looking up) or “bird’s-eye” (looking down) are usually associated with three-point perspective, but they can be achieved in one-point, too.



In a three-point perspective interior, the viewer is located inside of the rectangular prism. The line of sight will point either to the far bottom corner for a bird’s-eye or the far top corner for a worm’s-eye. A bird’s-eye interior begins with the floor and walls. You can add details using the same three vanishing points. All vertical edges will originate from the third vanishing point below the horizon line. Right and left edges will originate from the left and right vanishing points, respectively. A worm’s-eye interior begins with the ceiling and walls. Details are again added



*BIRD'S EYE INTERIOR*

*WORM'S EYE INTERIOR*

using the same three vanishing points. All verticals originate from the third vanishing point above the horizon line. Right and left edges are formed by the left and right vanishing points, respectively.

Distinguishing the above types of perspective can be effectively used in the process of teaching students to construct perspective images. For example, in one-point perspective, we can say that all sets of parallel lines meet at one point, and that one side of the object is parallel to the picture plane, and so on. By effectively using the ability to distinguish between one, two and three

point perspectives in the educational process, the teacher achieves the student's mastery of the correct way of constructing images. The student learns the true nature of the rules and laws of realistic depiction of existence. In addition, he will be able to analyze artistic and aesthetic works of visual art and understand what is the secret of the creation of works of art.

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VOLUME-4, ISSUE-2

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