Exterior or Interior Design:
One, Two & Three Perspective

Linear Perspective is a system of drawing in which the artist attempts to create the illusion of spatial depth on a two-dimensional surface.

Two Point Perspective: Exterior.

It works by following consistent geometric rules for rendering objects as they appear to the human eye. For instance, we see parallel lines as converging in the distance, although in reality they do not. Stated another way, the lines of buildings and other objects in a picture are slanted inward making them appear to extend back into space.

One Point Perspective: Interior.

If lengthened these lines will meet at a point along an imaginary horizontal line representing the eye level. Each such imaginary line is called an orthogonal. The point at which such lines meet is called a vanishing point.

One Point Perspective: Interior.
History of Perspective

The invention of linear perspective dates to the early 1400s, with the architect and artist Filippo Brunelleschi's experiments in perspective painting and Leon Battista Alberti's treatise on perspective theory. Leonardo da Vinci probably learned Alberti's system while serving as an apprentice to the artist Verrocchio in Florence.

Leonardo Da Vinci's Last Supper.

Basic Terminology

ONE AND TWO-POINT LINEAR PERSPECTIVE

**Figure 5.25** In this drawing the lines gradually come together and meet at one point in the distance. This is one-point linear perspective.

**Figure 5.26** In this drawing the lines come together and meet at two points. This is two-point linear perspective.

Three Point Perspective

3 Vanishing Points
The **horizon line** runs across the canvas at the eye level of the viewer. It is the line where the sky appears to meet the ground. Note that the **horizon line** is always at eye level (note that even if you are looking down, your eye level remains at the height of your eyes, not down where you are looking).

The **vanishing point** is usually located near the center of the horizon line. The **vanishing point** is where all parallel lines (orthogonals) that run towards the horizon line appear to come together like train tracks in the distance.

**Orthogonal lines** are lines that converge at the **vanishing point**. These are any lines that are moving away from the viewer at an angle parallel to the direction that the viewer is looking.

**Advanced Concepts: Shadow Casting**

Casting shadows, even from simple objects, can be complicated. You need to establish an additional **vanishing point** on the **horizon line**, directly below the light source, and use this point as well as the light source point to cast the shadow lines through the upper and lower corners of the objects.
STEP ONE: You will complete one of the following three point perspective drawings projects on 18 x 24 inch paper:
- A three-point perspective drawing of at least three exterior buildings of varying heights, with accompanying detail sitting somewhere in an exterior space as well as accompanying details.

OR

- A three-point perspective drawing of an interior space, such as a living room, a games room or a kitchen. The room must include at least one window and one door, as well as accompanying furniture.

STEP TWO: Work in light pencil initially, in order to ensure that you can erase any mistakes. The completed drawings should not appear as ‘studies’ in linear perspective, but finished renderings that are original and personalized.

YOUR DRAWING MUST INCLUDE A LIGHT SOURCE AND SOME SHADOWS (I.E. SOME VALUE)

STEP THREE: REFLECT: Answer the following questions using the elements and principles of design and hand them in with your completed drawing(s) for evaluation.

1. What part of your finished project did you find most successful and why?
2. What part of your finished project did you find least successful and why?
3. If you had to do this project, what part would you change or improve on and why?
PERSPECTIVE DRAWING – TERMS AND CONCEPTS

Linear perspective – a graphic system that showed artists how to create the illusion of depth and volume on a flat surface.¹

Three dimensional – having length, width, height, actual or implied (illusory)

Eye level – the viewpoint changes in relation to the position of the viewer; at eye level objects appear to overlap the horizon, or occur in the context of a room interior.

Bird’s Eye View – where objects are seen from above.

Ant’s Eye View – where objects loom large over the head of the viewer.

Horizon Line – always at eye level; placement on the page relates to the viewpoint.

Vanishing Point – always on the horizon; all receding lines move toward the vanishing point.

Parallel Perspective – lines that are a constant distance apart, and do not converge or coincide.

Picture Plane – an imaginary sheet of glass between the viewer and the image. The frame, the paper surface, the viewer finder. Albrecht Durer actual used a pane of glass to achieve foreshortening, where the model reclined at an extreme angel.

Projection Line – Slanting lines on buildings and other objects appear to extend back into space. If these lines are lengthened, they will eventually meet at a point along an imaginary lines representing eye level. The point at which these lines meet is called a vanishing point.

Vertical – perpendicular, at right angles to the horizon.

Receding – the real or apparent progression of lines, shapes, values and colours towards the extreme distance.

Overlap – objects nearer to the viewer appear larger and in front of objects near to the horizon.

Greyscale – a progressive set of grey tones that become darker as they move down a scale.

Aerial or Atmospheric perspective – uses hue, value, and intensity to show distance in a painting/drawing.

¹Mittler, Art in Focus, pages 356-357.
one point perspective stairs

Connect the corners of each stair to the vanishing point IN LIGHTWEIGHT PROJECTION LINES. Draw a vertical line for the bottom step, and a horizontal for the flat surface. Finish and line-in.

NOTE: EACH STAIR IS THE SAME LENGTH AND HEIGHT AS ALL OF THE OTHERS!
**How to draw a cube in parallel perspective (one point)**

48. Draw a square without using a ruler, making sure the verticals and horizontals are absolutely perpendicular.

49. Then draw the horizon line and decide on the position of the vanishing point. This must be very near the centre of vision, or we won’t be working with parallel perspective.

50. Draw a straight line from each of the four corners of the square to the vanishing point.

51. Draw in line A parallel to line B, thus forming two sides of the base of the cube.

**How to draw a cube in oblique perspective (two point)**

55. Without using a ruler or set-square, draw a vertical line to form the nearest edge of the cube. The length of the line should be equal to the height of the cube.

56. Then draw, by eye, the square forming the most visible plane. Remember that the edges A and B of this plane must extend to one of the vanishing points on the horizon, so the lines must be angled accordingly.

57. Extend edges A and B to the point where they meet. This fixes the vanishing point and the horizon.

58. Now draw the square forming the plane which stands at a right angle to the first plane. Since less of this plane is visible, it is more foreshortened. In order to be the same size as the first plane, it needs to look higher than it is wide.

59. Extend sides C and D of this plane to fix the other vanishing point on the horizon.

60. Draw straight lines from points E and F to both vanishing points, thus forming the top square of the cube.

61. Finally, as though the cube were made of crystal, draw edges G, H and I. To do this, draw a line from J to the vanishing point at the right and from K to the vanishing point at the left.
### A1. The Creative Process: apply the creative process to create a variety of art works, individually and/or collaboratively:

A1.1 use a variety of strategies, individually and/or collaboratively, to generate ideas and to develop plans for the creation of art works (e.g., in small groups, use brainstorming, research, concept webs, and/or mind maps to generate original and imaginative ideas; filter their ideas to select a suitable one to serve as the basis for their art work; use notes and/or thumbnail sketches to help them develop clear and flexible plans that show attention to detail; revise their plans on the basis of peer- and self-assessment)

A1.2 use experimentation, reflection, and revision when producing a variety of art works in each of the following areas: drawing, sculpture, plans that show attention to detail; revise their plans on the basis of peer- and self-assessment)

select a suitable one to serve as the basis for their art work; use notes and/or thumbnail sketches to help them develop clear and flexible expectations for assignments meet Work does not demonstrate some areas of extreme black or white. The composition contains minimal value to reflect three dimensionality. 3 - 4

Work demonstrates minimal effectiveness in demonstrating the process of following procedures and skill development. 6 - 6.5

The submitted work appears slightly incomplete. Some additional effort could have been included: time has been slightly mismanaged. Work demonstrates limited detail. 1

Work demonstrates limited degree of clarity. 0.5

Answers are vague/ incomplete. 0.5

Incomplete.

Work demonstrates no areas of extreme black or white. The composition does not contain sufficient value to reflect three dimensionality. 1

Student demonstrates limited effectiveness in demonstrating the process of following procedures and skill development. 5

The submitted work appears obviously incomplete. Much more effort could have been included: time has obviously been mismanaged. 1

Work demonstrates limited detail. 1

Incomplete.

Work demonstrates limited degree of clarity. 0.5

Answers are vague/ incomplete. 0.5

Incomplete.

Work demonstrates limited effectiveness in demonstrating the process of following procedures and skill development. 5

Student demonstrates limited knowledge of spatial relationships. 0.5

Incomplete.

The completed work appears largely unoriginal and not creative in execution. Many exemplars of similar work exist. Work demonstrates good knowledge of spatial relationships. 0.5 - 1.0

Student demonstrates limited knowledge of spatial relationships. 0.5

Incomplete.

Work demonstrates limited degree of clarity.

Incomplete.

Work demonstrates some areas of extreme black or white. The composition contains sufficient value to reflect three dimensionality. 3 - 4

Student demonstrates considerable effectiveness in demonstrating the process of following procedures and skill development. 7 - 7.5

The submitted work appears slightly incomplete. Some additional effort could have been included: time has been slightly mismanaged. Work demonstrates substantial detail. 3 - 4

Work demonstrates exemplary detail. 5

Work demonstrates accurate and balanced use of media, elements and principles of design, and/or symbolic and/or visual language. The completed work is creative in execution. Many exemplars of similar work exist. Work demonstrates substantial knowledge of spatial relationships. 1.0 - 1.75

Student demonstrates impressive knowledge of spatial relationships. 2

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A.3 document their use of the creative process in a portfolio (e.g., include evidence of their conceptual, creative, and technical skills; include thumbnail sketches, checklists, and/or graphic organizers to show evidence of experimentation, reflection, and revision), and refer to this portfolio to reflect on how effectively they have used the creative process

A2. The Elements and Principles of Design: apply elements and principles of design to create artworks for the purpose of self-expression and to communicate ideas, information, and/or messages;

A2.1 use various elements and principles of design to create art works that express personal feelings and/or communicate emotions to an audience

A2.2 apply elements and principles of design as well as art-making conventions to create art works that communicate ideas, information, or messages, and/or that convey a point of view on an issue

A3. Production and Presentation: produce art works, using a variety of media/materials and traditional and/or emerging technologies, tools, and techniques, and demonstrate an understanding of a variety of ways of presenting their works and the works of others.

A3.1 explore and experiment with a variety of media/materials, including alternative media, and traditional and/or emerging technologies, tools, and techniques, and apply them to create art works

B1. The Critical Analysis Process: demonstrate an understanding of the critical analysis process by examining, interpreting, evaluating, and reflecting on various art works;

B1.1 identify and describe their initial reactions to a variety of art works, and explain the reasons for their reactions (e.g., the aspects of the work and/or their personal experiences that contributed to their first impressions of its mood, subject, intent)

B1.2 identify and describe the elements and principles of design used in their own art works and the works of others, and describe their effects (e.g., how line, colour, and shape are used to create emphasis, mood, and/or movement)

B1.3 explore and interpret a variety of art works, both historical and contemporary, to identify and describe their purpose and style, the materials used, and the meanings the works convey (e.g., compare medieval and Renaissance art or architecture with respect to their style and purpose and the media/materials they use; describe the style and meaning of the works of Roy Lichtenstein)

B1.4 use a variety of strategies (e.g., peer- and self-assessment, formal critiques, feedback and reflection following public displays) to identify and reflect on the qualities of their own art works and the works of others, and evaluate the effectiveness of these works

B2. Art, Society, and Values: demonstrate an understanding of how art works reflect the societies in which they were created, and how they can affect personal values;

B2.3 identify and describe ways in which creating and/or analysing art works has affected their personal identity and values

C1. Terminology: demonstrate an understanding of, and use correct terminology when referring to, elements, principles, and other components related to visual arts;

C1.1 use appropriate terminology related to elements and principles of design when creating and analysing art works

C1.2 use appropriate vocabulary to describe techniques, materials, and tools when creating and presenting visual art works

C1.3 identify and describe the stages of the creative process and the critical analysis process (e.g., how reflection relates to the other stages of the creative process)

C2. Conventions and Techniques: demonstrate an understanding of conventions and techniques used in the creation of visual art works;

C2.1 demonstrate an understanding of a variety of techniques that artists use to achieve specific effects (e.g., the use of atmospheric perspective to create the perception of depth, the use of additive and subtractive sculpture to explore space and form, the use of layering to provide a sense of dimensionality)

C2.2 demonstrate an understanding of several conventions used in visual art works (e.g., exaggeration, metaphor, simile, symbols, synectics; conventions associated with heroic, narrative, naturalistic, and satirical works)

C3. Responsible Practices: demonstrate an understanding of responsible practices in visual arts.

C3.2 demonstrate an understanding of safe and conscientious practices associated with the use of materials, tools, and technologies in visual arts, and apply these practices when creating and/or presenting art works (e.g., use appropriate precautions when dealing with hazardous materials; adopt protective measures when using sharp tools; keep their work space clean and free of physical and other hazards; demonstrate respect for classroom facilities, tools, equipment, and technological devices)