One and Two Perspective: Exterior & Interior Design

NAME:_____

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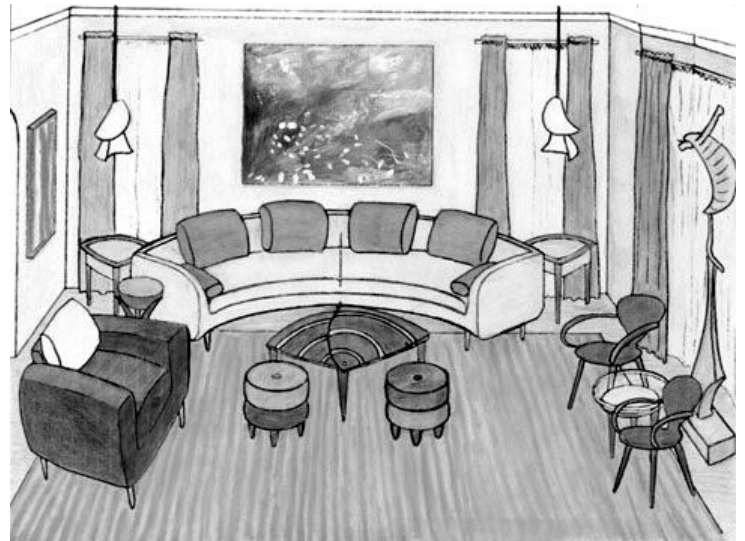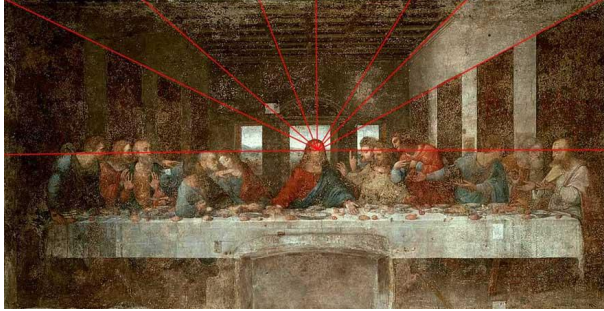
One Point Perspective: Interior.
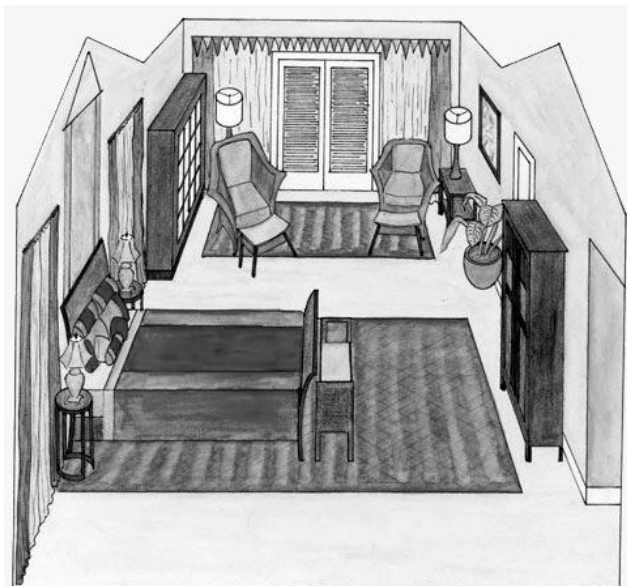
If lengthened these **lines** will meet at a point along an imaginary horizontal **line** representing the eye level. Each such imaginary line is called an **orthogonal.** The point at which such **lines** meet is called a vanishing point.

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.
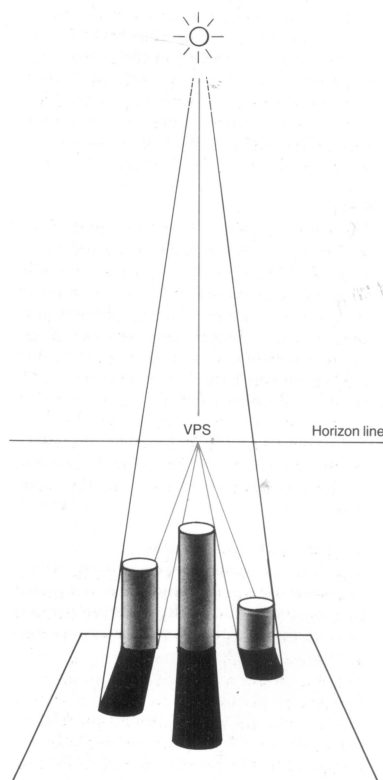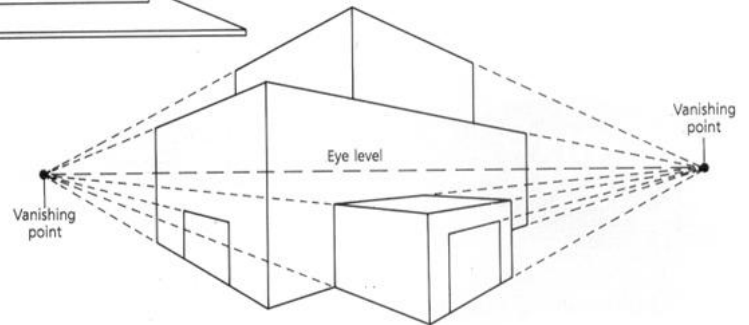
Leonardo Da Vinci's Last Supper.

Basic Terminology

ONE AND TWO-POINT LINEAR PERSPECTIVE
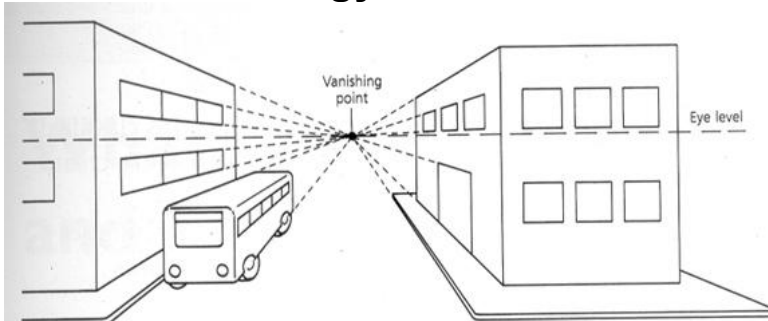
▲ FIGURE 5.25   In this drawing the lines gradually come together and meet at one point in the distance. This is one-point linear perspective.

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

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.

Shadows — artificial light Rays from an artificial light radiate from a single point. The further away from the light source the rays are, the wider apart they will be. When shadows are thrown from an artificial source, a point is found vertically below that source. It is from this point that the shadows will radiate. In this simple interior, there is a single light-source. A point is found vertically below the source of light, on the table, for those objects on it, and, on the floor, to find those shadows cast on the floor. Shadows cast by artificial light are usually larger.
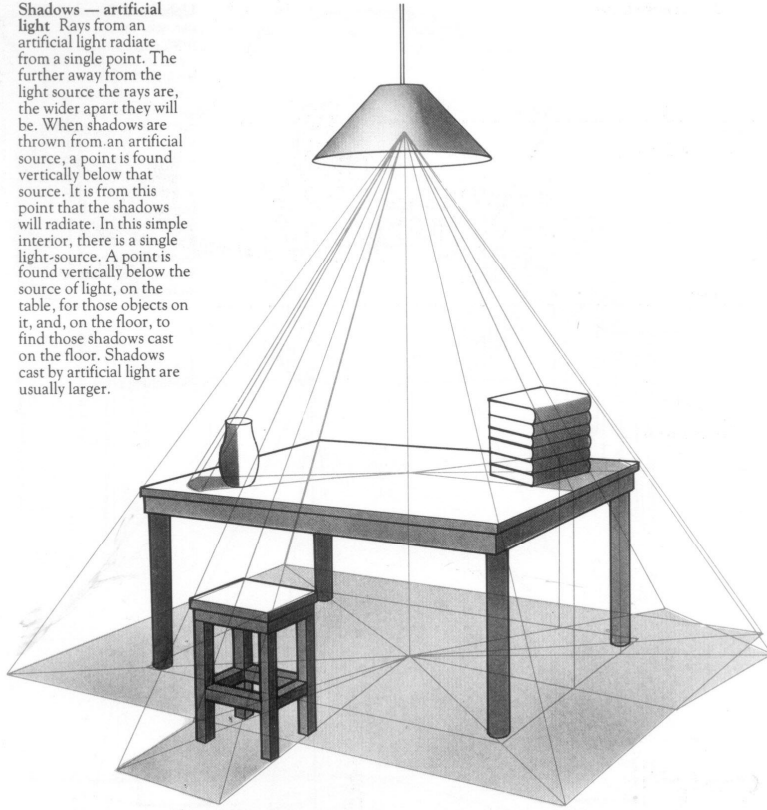
STEP ONE: You will complete one of the following two point perspective drawings projects on 18 x 24 inch paper:

• A **two-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 **two-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?

When more than one light-source is involved, the interplay of shadows can be used compositionally. Shadows cast by both lights, as can be seen in this drawing, are darker. By adding more lights, interesting tonal variations can be achieved.
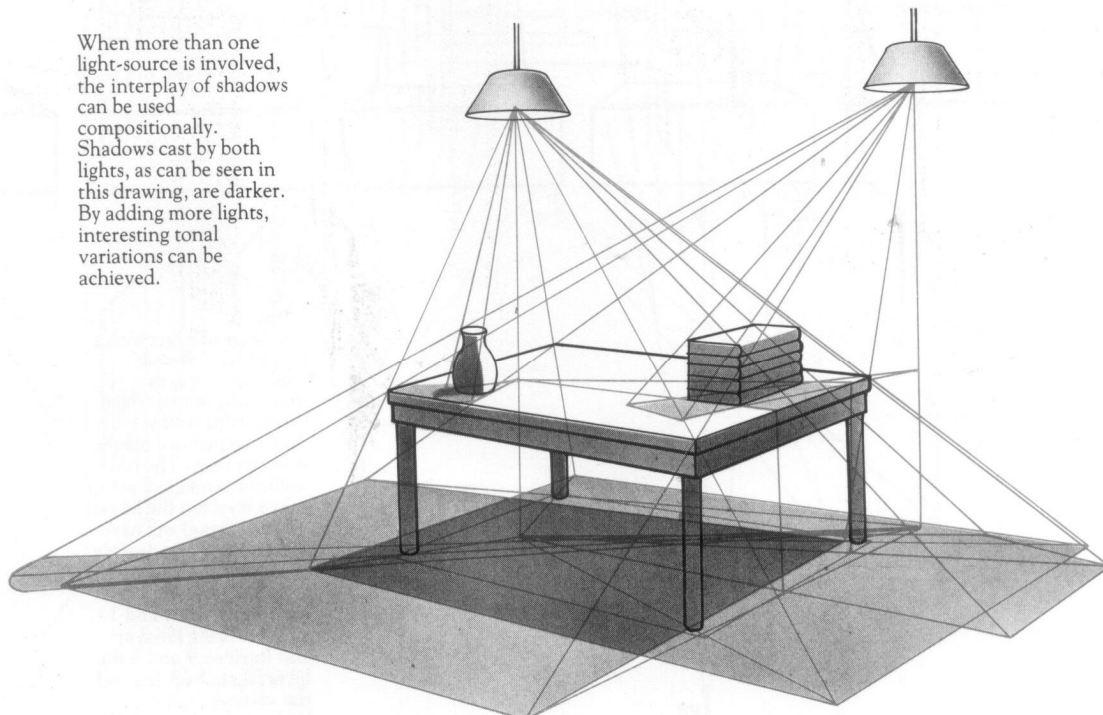
PERSPECTIVE DRAWING – TERMS AND CONCEPTS

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

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

Eye level – the viewpoint changes in relation to the position of the viewer; at eve 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. Albrect 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.

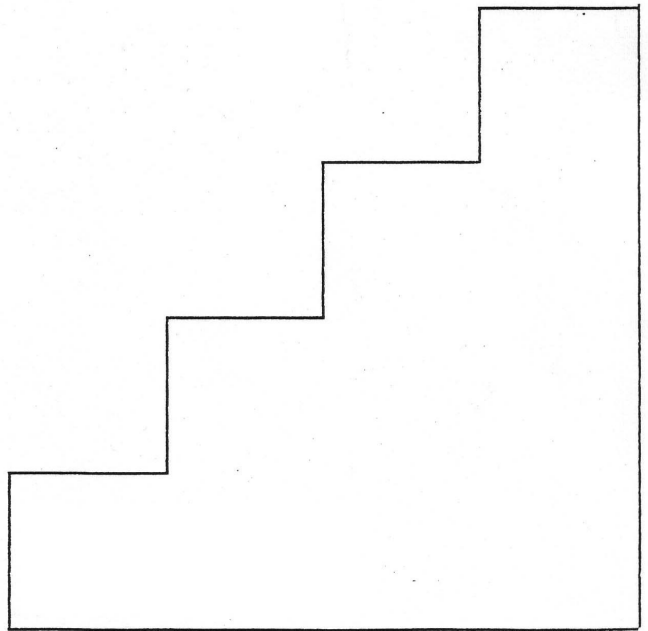**Overlap** – objects nearer to the viewer appear larger and in front of objects near to the horizon.

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.
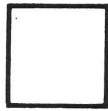
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[i] Mittler, Art in Focus, pages 356-357.
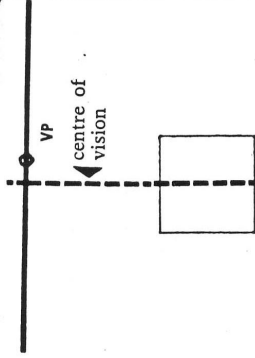
one point perspective stairs

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.
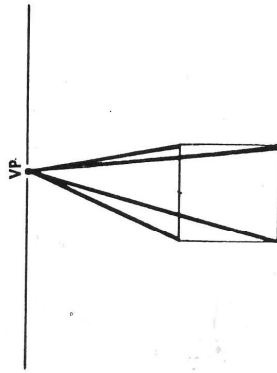NOTE: EACH STAIR IS THE SAME LENGTH AND HEIGHT AS ALL OF THE OTHERS!

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 then join points L and M to complete
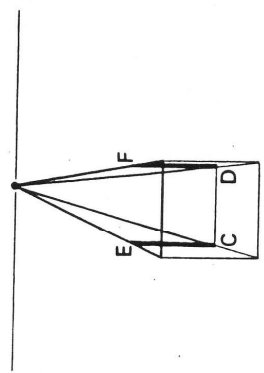
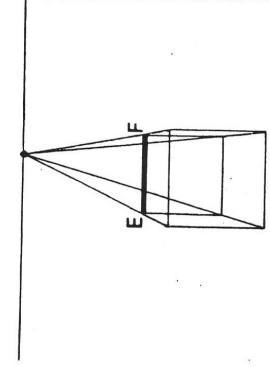48. Draw a square without using a ruler, making sure the verticals and horizontals are absolutely perpendicular.

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.

52. From points C and D on the base of the cube, draw two vertical lines to points E and F.

53. Finally, complete the top square by joining points E and F with a new horizontal line, as shown.

Two Point Perspective Drawing Rubric

Name:_____

Achievement Criteria	Level 0	Level 1	Level 2	Level 3	Level 4	
Thinking/ Inquiry Concept & Meaning: Two Point Perspective	Work does not meet assignments expectations for this category. Incomplete. 0	Concept is unclear and/or weak. Meaning or ideas conveyed are not on par with student grade level. 0.5	Concept is slightly unclear and/or weak. Meaning or ideas conveyed are below expectations for student's grade level. Applies some of the elements & principles of design while composing work. 0.5 - 1.0	Concept is clear and valid. Meaning or ideas conveyed are on par with student's grade level. Applies considerable elements & principles of design while composing work. 1.0 - 1.75	Concept is clear and strong. Meaning or ideas conveyed are above expectations for student's grade level. Applies substantial elements & principles of design while composing work. 2	/2
Knowledge/ Understanding Creativity & Originality	Work does not meet assignments expectations for this category. Incomplete. 0	The completed work is largely unoriginal and not creative in execution. Many exemplars of similar work exist. 0.5	The completed work is largely unoriginal and not creative in execution. Many exemplars of similar work exist. 0.5 - 1.0	The completed work is largely unoriginal and not creative in execution. Many exemplars of similar work exist. 1.0 - 1.75	The completed work is largely unoriginal and not creative in execution. Many exemplars of similar work exist. 2	/2
Composition: Proper use of perspective	Work does not meet assignments expectations for this category. Incomplete. 0	Student demonstrates limited knowledge of spatial relationships. 0.5	Student demonstrates good knowledge of spatial relationships. 0.5 - 1.0	Student demonstrates substantial knowledge of spatial relationships. 1.0 - 1.75	Student demonstrates impressive knowledge of spatial relationships. 2	/2
Application/ Creation Value (Shade & Tone)	Incomplete. 0	Work demonstrates no areas of extreme black or white. The composition does not contain sufficient value to reflect three dimensionality. 1	Work demonstrates few areas of extreme black or white. The composition is grey overall or contains minimal value to reflect three dimensionality. 2	Work demonstrates some areas of extreme black or white. The composition contains sufficient value to reflect three dimensionality. 3 - 4	Work demonstrates exact and balanced amounts of extreme blacks, whites & greys. The composition contains balanced value to reflect three dimensionality. 5	/5
Process: Demonstration of Skill Development & Following Procedures including Clean Up	Work does not meet assignments expectations for this category. Incomplete. 0	Student demonstrates limited effectiveness in demonstrating the process of following procedures and skill development. 5	Student demonstrates some effectiveness in demonstrating the process of following procedures and skill development. 6 - 6.5	Student demonstrates considerable effectiveness in demonstrating the process of following procedures and skill development. 7 - 7.5	Student demonstrates superior effectiveness in demonstrating the process of following procedures and skill development. 8 - 10	/10
Completion/ Neatness	Incomplete. 0	The submitted work appears obviously incomplete. Much more effort could have been included: time has obviously been mismanaged. 1	The submitted work appears slightly incomplete. Some additional effort could have been included: time has been slightly mismanaged. 2	The submitted work appears slightly incomplete. Some additional effort could have been included: time has been slightly mismanaged. 3 - 4	The submitted work appears slightly incomplete. Some additional effort could have been included: time has been slightly mismanaged. 5	/5
Detail	Incomplete. 0	Work demonstrates limited detail. 1	Work demonstrates some detail. 2	Work demonstrates substantial detail. 3 - 4	Work demonstrates exemplary detail. 5	/5
Communication Accuracy: Two Point Perspective	Incomplete. 0	Work demonstrates limited degree of clarity. 0.5	Work demonstrates some degree of clarity. 0.5 - 1.0	Work demonstrates considerable degree of clarity. 1.0 - 1.75	Work demonstrates high degree of clarity. 2	/2
Reflection Questions		Answers are vague/incomplete. 0.5	Answers are somewhat clear and complete. 0.5 - 1.0	Answers are clear and complete. 1.0 - 1.75	Answers are clear & exemplary. 2	/2
						/35

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., use research, synectic charts, and/or a class brainstorming session to generate a variety of creative ideas; reflect on the suitability of the ideas and choose one to serve as the basis for their plan; use notes and/or thumbnail sketches to develop their plans; revise their plans on the basis of peer- and self-assessment)

A1.2 use exploration/experimentation, reflection, and revision when producing a variety of art works in each of the following areas: drawing, sculpture, painting, and printmaking (e.g., explore a variety of materials and/or techniques; reflect on the input of their peers; refine their art work on the basis of useful feedback)

A1.3 document their use of the creative process in a portfolio (e.g., include thumbnail sketches of ideas and/or plans, notes on or examples of the results of experiments with different media or techniques, and copies of their preliminary and final work to show evidence of revision and artistic growth), 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 art works for the purpose of self-expression and to communicate ideas, information, and/or messages;

A2.1 explore elements and principles of design, and apply them to create art works that express personal feelings and/or communicate emotions to an audience (e.g., explore the use of colour, texture, and/or space to express specific emotions)

A2.2 apply elements and principles of design to create art works that communicate ideas and information

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 and traditional and/or emerging technologies, tools, and techniques, and apply them to produce 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;

B1.3 interpret a variety of historical and/or contemporary art works

B1.4 use a variety of strategies (e.g., peer- and self-assessment, formal and informal critiques, small-group and class discussions) 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;

B2.1 identify the functions of various types of art works in past and present societies

B3. Connections Beyond the Classroom: demonstrate an understanding of the types of knowledge and skills developed in visual arts, and identify various opportunities related to visual arts.

B3.1 identify types of knowledge and skills acquired in visual arts (e.g., knowledge related to visual literacy; creative problem-solving skills, visual communication skills), and describe how they could be applied in a variety of areas of personal and professional life

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 when identifying and describing the use of elements and principles of design in their own art works and the works of others

C1.2 use appropriate vocabulary to describe techniques, materials, and tools when creating and presenting visual art works (e.g., brayers, conté, frottage, markers, painting techniques, pencil techniques, relief, stencil)

C1.3 identify the stages of the creative process and the critical analysis process using appropriate terminology

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 some techniques that artists use to achieve specific effects (e.g., the use of cross-hatching to create a feeling of depth and dimension; the use, in watercolour painting, of a transparent wash of colour to create the effect of light coming through the composition)

C2.2 demonstrate an understanding of some of the conventions used in visual art works (e.g., the use of metaphor, similes, symbols, synectics to create a specific effect or to communicate an idea; the use of conventions associated with narrative art)

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

C3.2 demonstrate safe and conscientious practices associated with the use of materials, tools, and technologies in visual arts (e.g., identify hazardous materials and adopt appropriate precautions and/or protective measures when using them; demonstrate respect for property, including classroom facilities, tools, equipment, and technological devices)