

Part #4

# The Perception of Spaces

## Part #4 - Introduction

In the previous two lessons you have worked on understanding and perceiving edges and contours. In this lesson you will learn about the Perception of Spaces.

Whereas contours define the ‘shared edges’ of objects, they also define what is ‘outside’ of the object; space!

During this lesson you will learn about ‘spaces’ as they relate to drawing and how to correctly perceive and draw them. The correct rendition of the space contained within a scene can make or break a drawing.

You will also learn a method for correctly scaling a scene onto your drawing paper. This method makes starting a new drawing less troublesome.

## Objectives

The objectives of this fourth lesson are:

- To define the Perception of Spaces
- To define the concept of negative space and positive forms
- To discuss why negative space is important
- To define composition in terms of space and form
- To define the concept of ‘The Basic Unit’
- To show how to use the Basic Unit in drawing
- To show how to ‘scale’ a drawing correctly

As previously, these objectives will be achieved using illustrated explanations and practical exercises.

## What is Space?

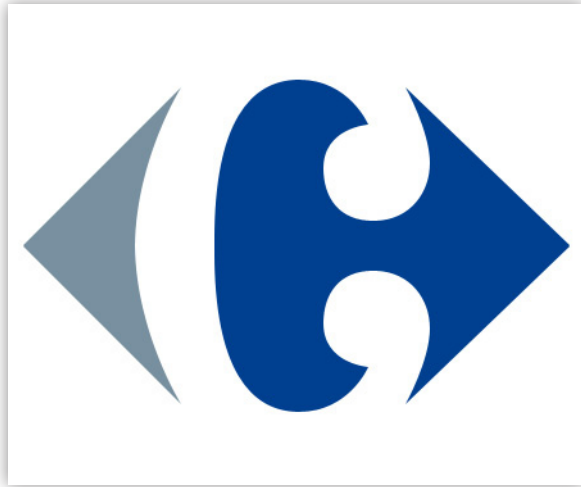
All physical objects in the world exist in normal three-dimensional space, known in mathematics as Cartesian Space, and occupy a specific amount of that space. A solid object displaces the air from the space it occupies whereas a non-solid one has air both outside and within the apparent space it occupies. Normally, where there is only ‘air’ we perceive it as empty space. For example, in a room in your home the furniture and fittings occupy a certain proportion of the available space. The rest of the room, filled only with air, we perceive as ‘empty space’.

When we make a drawing of a scene or subject this ‘empty space’ becomes very significant to the successful rendition of the scene and the objects within it. It is this empty space that helps to define the contours of the objects in the scene. Also, the ‘empty space’ between the objects in a scene shares the

contours of the objects. The shared contours of the objects and the space form definite ‘shapes’ which need to be consciously perceived so that they can be included in your drawing of the scene.

Traditionally, the area of a drawing that represents an object is called a positive form. The areas of a drawing outside the positive forms are called negative spaces. An alternative term used, especially in perception, is Figure/Ground where ‘Figure’ is the positive form and the ‘Ground’ is the negative space surrounding the figure.

## Negative Spaces - Positive Forms



*Figure 1. Figure/Ground is often used for logos as shown here for the french supermarket group Carrefour.*

Sometimes the figure/ground concept is used in reverse as seen in the company logo at right (Fig. 1), used by a well-known superstore, where the ‘figure’ shapes are being used to define the company name using the ‘ground’ or negative space. Note that your brain completes the missing edges of the negative space letter ‘C’.

The perception of negative spaces helps to overcome the brain’s symbol system. L-Mode doesn’t have a symbol or name for ‘space’, the apparent ‘emptiness’ formed by the complex shapes of the areas that define the outline of an object, so it cannot handle the job of ‘seeing’ these shapes and ‘switches off’. This permits R-Mode to take over the task allowing accurate perception of the observed shape. Once a shape formed by negative space is observed it can be drawn.

**Why is learning to see negative spaces so important?**

By learning to perceive negative spaces you can, with practice, easily obtain the outline shape of any object simply by observing and drawing the spaces around the object (Fig. 2).



*Figure 2. The negative space defines an objects outline*

This is one of the best techniques to use for overcoming the tendency of L-Mode to interfere with the process of drawing. If, while drawing, you feel L-Mode ‘getting in the way’ by constantly naming the object or its parts, switch your attention to the negative spaces and draw those instead. You will quickly realise that this is a great way to get through those ‘difficult’ moments of doubt experienced whilst drawing.

### **Negative Spaces are Important**

The negative spaces of a scene are just as important to the drawing as the objects being drawn. Well observed and drawn negative spaces help to make a drawing look ‘right’ and complete. By giving the same attention to the negative spaces as you do to the positive forms, your rendition of the objects in the scene will be much more accurate and well seen.

In drawing, the term composition means the way the components of a drawing are arranged by the artist. Some key components of a composition are:

- Positive shapes – the objects or persons
- Negative spaces – the ‘empty’ areas
- The Format – the relative length and width of the bounding edges

To compose a drawing the artist places and fits together the positive shapes and the negative spaces within the format with the goal of unifying the composition.

The format controls the composition in that the shape of the drawing surface, usually rectangular paper, will greatly influence how you distribute the shapes and spaces within the format.

At first, many people learning to draw completely forget or ignore the bounding edges of the format resulting in discordant compositions. Always remember that the edges of your format are ‘contours’ that help to define the spaces that meet the edges of the format.

As previously mentioned, one of the most useful tools you have for helping you to determine the best composition is the card viewfinder. Since the viewfinder is used to isolate parts of the whole scene it makes it easier to select just the right area for your drawing.

A common question people learning to draw have is: how or where do I start a new drawing? Once you have decided on your composition what is the best method to get the drawing going? Also, the issue of scale often causes problems. If you start a drawing with the first object too large the composition won’t fit in the format. Conversely, if the first part of the drawing is too small you will have unwanted scenery in the format. The answer to both these problems is the concept of the ‘Basic Unit’. Using the ‘basic unit’ idea is an invaluable method of starting any and all drawings!

## **The Basic Unit**

Starting a drawing with a ‘basic unit’ ensures that the composition you so carefully chose will be the same in your drawing as it was in the original scene.

All the objects and shapes in a scene form a definite relationship with each other and to draw the scene ‘realistically’ it is necessary to maintain these relationships. If you alter any one relationship, e.g. change the size or position of one object in relation to another, the entire drawing will be wrong.

The Basic Unit is a ‘starting shape’ or ‘starting unit’ (Fig. 3) that you choose from within the scene you are looking at through your viewfinder.



*Figure 3. In this subject, the width of the window has been chosen as the Basic Unit for the drawing.*

**Definition:** A basic unit is one single measure from within the subject that is used to assess every other length/width/height in the scene.

A *basic unit* can be a complete shape (e.g. the shape of a window or of a negative space) or it can be a single edge from point to point (e.g. the top of a door frame). The choice depends on what is easiest to see and use as your Basic Unit.

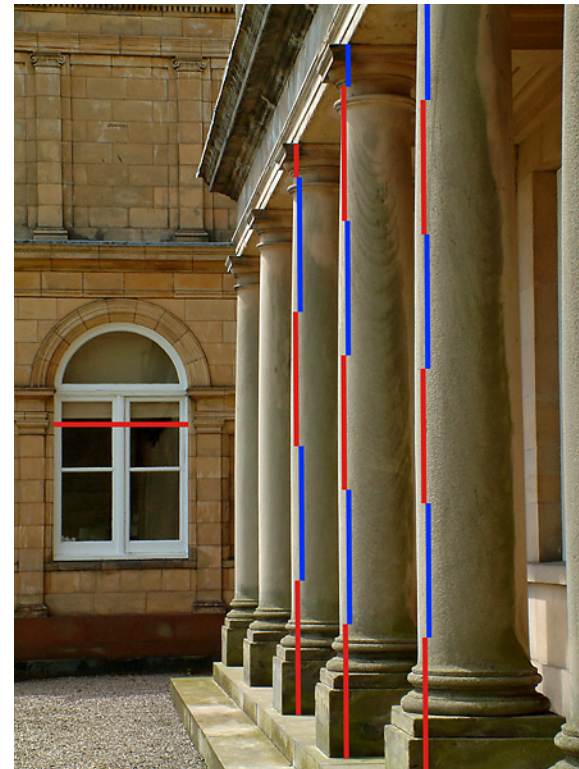
*“Choose a basic unit of medium size! A slightly smaller basic unit is better than one that is too big.”*

Always remember, all other sizes and proportions are determined relative to your Basic Unit. The Basic Unit is always called ‘One.’ In Fig 4 we see the basic unit being used to measure the width of the group of columns.





*Figure 4 (left). Using the Basic Unit from the window, we can determine the total width of the columns relative to the Basic units. In this case, the total column width is  $2\frac{1}{8}$  basic units.*



*Figure 5 (right). In the same way we found the total width of the columns, we can now measure the height of the columns using the basic unit. Due to perspective, each column is a slightly different height so the number of basic units for each is different as shown here. Using the basic unit to assess the height of each column will ensure the columns are the correct proportion relative to the window width.*

In Fig 5, we are using our Basic Unit, the width of the window, to find the height of the columns by asking, “How high are the columns counting in Basic Units?” Remember that you always go back and measure the Basic Unit and then count how many basic units there are in the object being assessed. Here you can see how the basic unit method ensures the heights of the three central columns are

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