continued to develop and perfect his system until his death in 1918. The Munsell Color Company was then formed to carry on his work and the system was improved and developed to the high standard that it has achieved today.

As already mentioned there are quite a number of systems which have been devised with the aim of classifying colour, from that of Athanasius Kirchner in 1617 to that of Alfred Hickethier in 1940. Between these two come some of the better known ones such as Otto Runge, M.E. Chevreul, Wilhelm Ostwald and, of course, Albert H. Munsell himself.

The majority of these systems are based on solid geometrical figures that are collectively known as colour solids. Otto Runge used a sphere to demonstrate his system, whereas Chevreul used a hemisphere. J.H. Lambert used a pyramid and Wilhelm Von Bezold a flat-sided cone. Both Wilhelm Ostwald and Ogden Rood used a double cone and A. Hoffier used both an octahedron and a double tetrahedron, while Charpentier and Alfred Hickethier preferred the cube.

It can be seen from the above just how many systems there are, and much has been written on each of them. Figures 1-3 show the basic shapes of a few of the colour solids that have been devised over the years. Figure 4 shows details of the Munsell colour solid. It can be seen from this that the overall shape is quite irregular and that the extreme peripheral is dictated by the extent to which each of the various hues reaches in terms of chroma. This will become apparent later.

To analyze the Munsell system in detail when it has already been dealt with in depth by others who are specialists in the subject would not serve any useful purpose to the student of interior design, where all the scientific and technical applications are not required. However, to a potential interior designer the system is still very important, and it is necessary to have a good working knowledge of it. You will be almost certain to encounter the Munsell system of colour notation when in practice, especially if having to deal with The American National Standards Institute, The
There are also interesting stained glass and concrete screens that can be designed for impressive areas if they do not need to be lit extensively by natural means. Since the thickness of glass is embedded into plaster or a concrete free-standing frame, it tends to assume a rather more solid appearance.

Antique glass, that has the ‘bull’s eye’ shape and uneven texture of the first window glass ever made, can be introduced into such features if desired. Indeed, techniques have been developed where actual coloured pieces can be fused or stuck onto a large plate glass window, in a random but balanced ‘glass mural’ either framed and free-standing or fixed to a suitable backing on a wall, and again properly lit to show its quality to advantage.

It is very important to understand that working with glass can be quite dangerous so it is important to consider the location of its use as well as the type of glass chosen. In addition, glass work needs to be done by a qualified glazier who understands the qualities of this very special but hazardous material.

Right: Polished staircase with clear acrylic treads and balustrade panels. 42mm diameter stainless steel handrail. Spiral Staircase Systems. www.spiralstair.co.uk

**Plastics**

It is the unusual and synthetic origins of this group of synthetic materials that make this subject so interesting. Always open to further developments, plastics have made a tremendous impact on the appearance and nature of the interior.

They have a number of advantageous properties, counterbalanced by certain problems. For example, they are able to perform some jobs better than any other material, since some of them can repel water and withstand acids, alkalis and heat. Although some do not hold their colour well they can be very strong and durable, capable of being formed into new shapes and forms, and glossy, colourful and exciting finishes, or milky and translucent and subtle textures. Impermeable to water, chemically inert, rot and decay proof, their initial drawbacks appeared to be a harshness of appearance, comparative costliness and a danger of dense toxic fumes in the event of fire. Today, of course, one of the main drawbacks of most plastics is their very indestructibility. Countless millions of tons of plastics are thrown away every year, only to survive virtually indefinitely in landfill sites. Burning them alleviates one problem while exacerbating another - namely the release of yet more highly toxic gases into the atmosphere. Thankfully, however, processes have now been developed whereby plastic can be shredded to a powder and then acted upon by specific microbes that ingest the harmful chemicals and excrete harmless ones. In addition there are now biodegradable plastics.
**Step Two**  Using Studio Tac or spray glue (be careful using this product as you will have to cope with airborne glue particles), attach the plan and the elevations to white foam core board (easy to use) or corrugated cardboard (more sustainable) and very carefully cut out the elevations with a sharp scalpel or X-Acto/craft knife. There should be an area left around the plan, since this will serve as the base for your study model. See Steps 2.1 and 2.2.

**Step Three**  Cut out the doors and windows in the elevations and then glue the walls in place on the plan board. Cut a “ceiling” to fit over the entire model (a removable one may be helpful for several studies).

**Step Four**  Use this simple model to study light and space.

You can use this method to prepare a simple student’s presentation model by rendering the plan and elevations, finishing the edges, cutting trenches to insert the walls and mitring the wall joints. Again, there are various ways of presenting models for the student and we encourage you to explore how this might be done as well as the materials that will help you.
Lesson AD10
Lighting

The Importance of Lighting in Interior Design
Lighting is one of the most exciting elements of interior design, and yet one that can still be neglected. Light is still sometimes treated as an appendage that must be added to perform a specific function, rather than as a building material whose unique characteristics demand that it be included in the design from the beginning. One wonders how it is that a profession which embraces so eagerly the aesthetic possibilities offered by new developments in structure and materials has, until relatively recently, largely overlooked the ability of light to create a made-to-order visual atmosphere.

To begin with, of course, there is a basic difficulty in visualizing light. Even if lighting is considered in the initial stages of design, the designer may feel s/he lacks the verbal and graphic vocabulary with which to communicate the pattern of light and shade seen in his or her mind’s eye to the consultant who will finally translate it into equipment.

It is essential for the designer to be familiar with the qualities, functions and characteristics of light and the techniques involved in its use. In this Lesson we will look at these fundamentals and explain how to break down the stages of lighting design into simple steps, and look at the various ways of representing your ideas on paper.

Creating successful lighting design in small commercial installations or most residential installations is clearly within the ability of the interior design professional. However, if highly specialized lighting or lighting for large commercial installations is required, it is important to consult lighting designers or lighting engineers to cover all aspects of the process fully. This does not mean that the professional interior designer will steer clear of larger lighting design projects; but it may well be necessary to work closely with a specialist lighting designer or engineer in order to create a successful and friendly environment.

Light
The old days of the single pendant light in the middle of the room are becoming a distant memory, and today designers look to lighting as one of the most important elements of interior design. Paramount, of course, is the need to provide a practical source of light for visibility, but added to this necessity is the aesthetic role of creating mood, defining form and highlighting the interior decoration. It is pointless to spend large sums on decoration, furniture and fittings if one then fails to provide a level of visibility that allows the client to enjoy these to the full.

Lighting needs to be considered at the earliest possible stage of the design process. The provision of power points, cables, the channelling of walls and the installation of tracking systems all need to be planned before any

Photograph by James Moms.
The Interior Archive