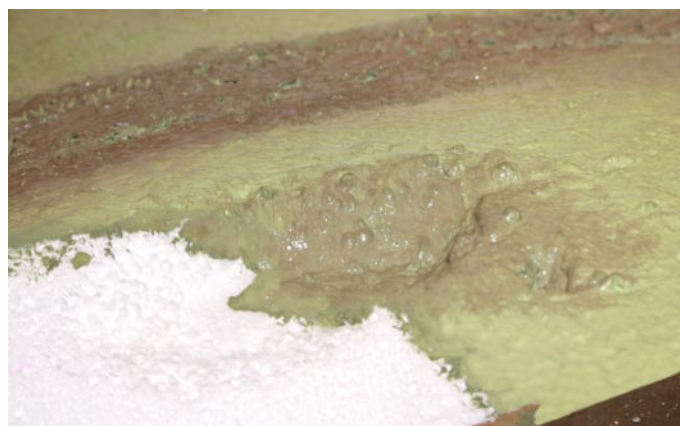


“Nothing communicates the purpose and function of a model better than the sense it belongs in the environment in which it is seen.”

Atmospheric model making is all about telling a story which usually means setting our subjects into a relevant context which helps explain their purpose. With this thought in mind very few people actually model landscape, terrain or scenery as a subject in it's own right, but everybody from dolls house collectors to railway modellers, taking in a wide range of other model making enthusiasts in between must have encountered the occasional need to model some sort of terrain or ground work as part of a diorama or other project. Perhaps the only occasion on which landscape is modelled in it's own right as a central feature is for the occasional topographical or aerial sketch model produced for museums and architectural firms. In such instances these models are normally made to much smaller scales than most hobbyist model makers would think of using.

The illustration below is of one such model I was commissioned to make in 1/500th scale. Although the materials and techniques used in these smaller scales are very different to those I intend discussing for more typical diorama projects, it is an excellent introduction to the most important aspect of landscape modelling. Three words sum up all you need to know about scenic modelling; “Subtle colour variation”. It doesn't matter what materials or techniques you use, or what scale you model in, scenic modelling won't look believable until you've achieved subtle variations of colour. There are loads of different scenic modelling materials on the market, and loads more things that can be found around the house and garden that are useful. All of these may be good, but none will look good on their own. You have to keep mixing things up to achieve variation. The more subtle variation you create the better looking the model will be. The ultimate goal is to reach the point where no single product or colour stands out in it's own right. If you can reach the point where the variation becomes so subtle you create the impression not of distinct or independent hues and tones, but of one continual spectrum of colour and texture, then you will have imitated nature.

It is very difficult to know where to start when producing a short guide to such a large subject, but since convention is to begin with a mention of materials then I can, at least, give a mention to a few of the more commonly used. The basic foundations of any model can be easily carved from expanded polystyrene foam, a product which is freely available as it is used in the packaging of all manner of goods. If you are actually buying materials to carve the ground contours of your diorama, look for the slightly tighter celled and more dense foam used as wall insulation. These can be bought in sheets of varying sizes and thicknesses, and are light and strong enough to not need additional bracing or support. Though you may wish to put a plinth or frame around the edge for cosmetic purposes.



The surface of this foam will then need treating to seal and texture it. Various types of plaster and filler are available from DIY stores which can be spread thinly, or thickly sculpted over the foam. This can be used to create anything from a basic muddy surface to rocky outcrops. Two basic bits of advice if working this way are to add a generous quantity of PVA glue to the plaster/filler, and also add a dollop of grey, brown or green paint to the mix. The glue gives a degree of flexibility to the brittle plaster coating reducing the likelihood of chipping. The paint makes chips less likely to show if they do occur. Nothing looks worse than beautifully modelled scenery with a bright white or pink scar across it where bare plaster or foam have been exposed.



When it comes to scenically dressing our basic foundation, model shops can provide us with all manner of chopped foam scatter products, along with fine fibres and flocks. The supermarket is often a good source of chopped herbs, whilst the garden centre or florist can be a good source of dried plants, all of which can also be useful. I'll make a point about colour here. Artists will commonly tell you that green is a mix of blue and yellow, indeed this is how most paints and dyes are made and most scenic modelling products are therefore coloured in such a way. If we wish to be pedantic about things then green is actually a small range of wavelengths of light spanning from about 490nm (the bluer end of the spectrum) through to about 570nm (the more yellow end). Natural greens of plants tend to be the longer wavelengths and as such are far more yellow than blue, indeed something such as olive green is, in effect just a really dark yellow. What is more the foliage of many plants actually includes a surprisingly large amount of red. Far too many scenic modelling products look wrong because there is too much blue pigment in the paints or dyes that colour them. Concentrate on those which look like drab creams, yellows or red-browns in the packet. If you buy the ones that look like lush verdant greens they probably won't look believable on your model. What is more don't just buy one packet, buy several different ones with variations of colour and texture so that you can mix these up to avoid achieving a uniform look. I have, over the years, acquired several huge boxes full of hundreds of products produced by many different manufacturers which I will blend and re-bag for my own convenience.



For longer grasses and reeds, or for work in larger scales you may have to resort to planting these by hand one tuft at a time. These could be made from bristle or hair, and flax or hemp fibres can be fine enough for model work. Fake fur fabric can be another good source of long fine fibres. When it comes to building up depth for deeper undergrowth and bushes we need a light and airy support onto which to apply our scatters or flock. Rubberised horse hair is an old traditional method though there are now lots of finer alternatives made from man made fibres. Theatrical wiggling is available in various colours and thickness and can be teased out into little balls or clumps and shaped to give the underlying structure of our bushes or hedgerows. There are also many natural dried plant products that have tiny rapidly branching stalks. The use of a selection of these can also build up a bit of depth and busy texture amongst modelled undergrowth. An aerosol adhesive can then be sprayed over these and fine scatter materials can be sprinkled on to build up colour and texture. Again try to build up each plant from several similar colours of scatter to give subtle variation, and try work in different shapes and height of bush for interest. Most of all though keeping looking back to your reference material to keep the variations in colour, texture and shape believable. We might only require something generic for the background, but we still want generic right, not generic wrong.



When using these scatter products you must bear in mind the three dimensional nature of plants. If glued directly to the basic carved landscape they will do nothing but give a fuzzy pale green surface to your sculpted plaster. In real life mature trees can easily grow to well over 30m tall which is still going to be very large even in a small scale. Depending upon the scale you are modelling in generic undergrowth and bushes may need to be several cm tall and you may still need more than 1cm depth for modelled grasses. Flocking fibres can be applied to a coating of glue using an electrostatic applicator to make them all stand on end. Such effects can give a remarkably convincing representation of individual blades of grass in the smaller scales providing you are patient enough to keep working in variations of colour, different lengths of fibres and the occasional bald patch or clumps of clover or other weeds to get a realistic effect.

Many models may require 'character plants'. These may be large feature trees, or could just be something with a very distinctive shape or colour of flower or foliage. The distinction is that whilst the above was all about fairly quick effects for building up variations of colour and texture in a generic backdrop, character plants may have to be more particular recreations that communicate something specific about the environment we are modelling. In many respects modelling plants should be easier than vehicles, buildings or other commonly modelled subjects, this is because we aren't obliged to achieve technical precision. Even within a single species of plant, the exact heights colours or shapes vary. All we need do is capture the basic character of the plant. However if you are used to an engineering approach to model making, then the lack of anything obvious to measure means you have to rely solely on observation and artistic judgement, so keep good reference photographs close to hand. What's more although the techniques used in modelling plants aren't difficult, they do rely on endless repetition and few people are willing or able to put in the time needed to do this convincingly.

The pictures here are of a project produced in 1/48th scale. Modelling a jungle called for numerous character plants. With large leaves up to 80mm long for the biggest palms, there was no way that the shapes I wanted could be created with generic scatters. Many of these leaves were cut or punched from paper and many more came from dried seed pods, ferns and other natural materials. Leaves on their own don't make plants and many of the stalks and tree trunks were twisted up from wire to form a skeletal tree. Surface textures could then be built up over these armatures using a variety of materials, from sculpting in epoxy putty to sponge, string and thick glue. Applying leaves to a model tree one by one takes patience and thankfully most of the palms with big leaves only required around twelve or fifteen leaves each. Nevertheless I did need a lot of palms and ferns to fill out this diorama and create the impression of dense impenetrable jungle.

If you are dealing with some of the more common European trees in the smaller scales, then it might not be the shapes of individual leaves that are important. It might be the basic shape of the trunk and branches that gives the tree its character or identity, or it could be how the leaves form distinctive clumps of foliage. Oak can be a very broad, irregular and seemingly unstructured tree, whilst elm can be taller and more elegant, willow is obviously noted for its long drooping limbs. If you put the same level of research and work into a model tree as you do any other aspect of your modelling there is no reason why you shouldn't get the same quality of end result.

Looking back at the previous couple of pages I kind of feel I've said nothing and everything about modelling plants. The techniques of foliage modelling aren't difficult, just time consuming, and have been endlessly described by others in much greater detail elsewhere. The distinction



between good foliage modelling and bad foliage modelling is solely down to the observational skills of the individual, and having the patience required to keep working away at achieving more and more subtle variations of colour and texture. Experience with the airbrush may also be useful as this can be used to both tone down contrasts and variations that are felt to be too strong, as well as introduce subtle variations into those areas which are felt too uniform. Many people are amazed at how quickly seemingly gaudy and unrealistic modelling can be transformed into something quite acceptable with nothing more than a thinly sprayed mist of pale creamy yellowy or grey brown paint applied gently over everything (including the main feature vehicles or subjects) thereby harmonising all the colours and contrasts. If you've never tried this do so! The improvement in results belies any notion of the simplicity and speed of such a technique. Anyway, as there's much more to terrain modelling than just plants I'm going to move on to other subjects.



Water can be one of the most notoriously difficult things to model. Subconsciously we all know exactly what it looks like as we see it in so many different places and in so many different forms on a daily basis. Unfortunately we never really pay it enough attention to become consciously aware of what gives it its character and makes it what it is. It is said that the sea never looks the same twice, and it is obviously going to be very different from a lake, a stream or a puddle. All of which will look very different from snow or ice and how often do you see anybody convincingly model fog, mist or steam?

Maritime modellers are perhaps those with the greatest need to convincingly model water. If modelling the sea around a ship you have to reproduce several factors; waves caused by wind, underlying waves due to tidal movement along with wash and wake patterns created by the ship. You also need to capture the varied colours of the sea as well as communicating its translucency and depth. Achieving any one of those is slow, getting them all right is a very time consuming challenge. I don't know of any quick techniques that are convincing but I can describe a painfully slow one I used for modelling the dirty swell of the North sea. The surface of the water in the 1/400th scale diorama below was created by individually sculpting each wave into a rolled sheet of soft epoxy putty taking care to texture the spray around the bow wave and crest of each little ripple. The colouring was applied with numerous washes of grey, blue, brown and green paint to build up the subtlety of colouring. This process was then repeated with inks and colourless acrylic wax to add to the translucency, followed by finally dry brushing across the crest of each wave and ripple to highlight the white spray.



Modelling the sea can be a big challenge but most modellers tend to tackle something a little less demanding. Most of us may require nothing grander than a gently flowing stream or a few puddles for our dioramas and scenic bases. For small areas of shallow water, believable effects can be achieved by simply painting the underside of clear plastic or thin glass, along with the possible application of a coat or two of varnish on top if you want to apply the slightest suggestion of ripples. More often that not the thing that identifies water is the reflections that form on its surface. As such, it may not be necessary to physically model the depth of any water, just achieve a good reflective surface and dark coloration to imply depth. In instances where we wish to model very clear water, or portray the things in the water then we will need to model whatever is containing the water, be it a river bed, the banks of a canal or maybe just a goldfish bowl. It is occasionally possible to create an acceptable effect by just using clear plastic or glass as an effective lid to form the surface of the water, leaving a space below. However, in such circumstances I prefer to work with clear embedding resin of the type used



for making paperweights. This can be believably coloured with touches of ink mixed into the resin, the resin can be poured to fill unusual and irregular shapes, it is self levelling and as it starts to cure and thicken it can be sculpted to work texture, ripples or waves onto the surface of the water being modelled. The down side to such an approach is that the area containing the water does need to be totally sealed so the liquid resin doesn't leak away before it cures and solidifies. Its high viscosity and surface tension does also means it forms a prominent meniscus creeping up the edges of whatever contains it. So you will need to go back and disguise this once the resin has cured.

Winter scenes with snow and ice are popular with many model makers because they can be very atmospheric. There is a common misconception that snow is white and that's as far as the story goes. Well snow might be white, but smothering a model with bright white is going to look poor. What makes model snow look believable is the subtle touches of colour used to exaggerate shadows in its surface to bring out ground contours, footprints, vehicle tracks or any other features. Snow itself can be easily modelled with a simple plaster based filler, and there are many products available from various model manufacturers that do the same job. How we enliven these is what will make all the difference. Touches of pale blue or silver worked into the snow can enhance the crispness and sparkle of a frosty winters morning. Touches of brown and grey can play towards the gloomy overcast and slushy nature of dirty snow. Thinly sprinkling snow such that underlying scenic work still shows through generally looks better than a thick blanket covering that hides everything beneath.

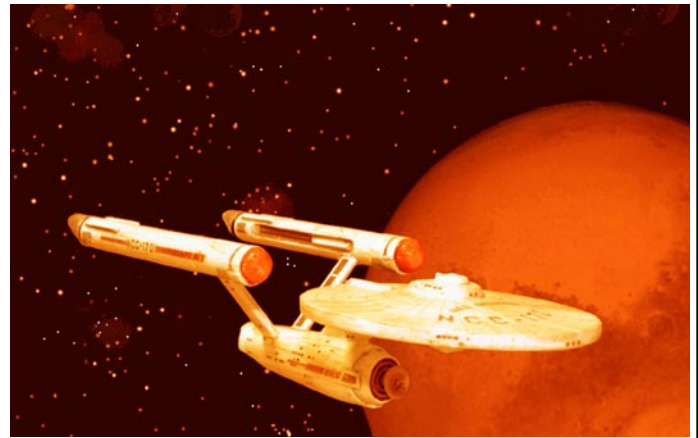


Well there's obviously much more I could have said about modelling water in it's various forms but this is supposed to be a brief guide so I'll move on. The list of other subjects that could be covered under the basic heading of terrain modelling depends largely on what you want the term to mean. I want to avoid true architectural modelling of buildings as this is a large and separate subject in it's own right. Nevertheless, for the purposes of dioramas and scenic bases many modellers may require bits of stone or brick walls, concrete or Tarmac and many other vaguely architectural features.



It may seem as if I'm being endlessly repetitious but I'm again going to return to the subject of subtle variation of colour. Brick, stone, concrete and Tarmac could easily be described as being just one colour, and many model manufacturers supply paint with these exact names. However, paint any of these features a single uniform colour and they will look wrong. Whilst it is important that each of these features give an impression of being basically one colour, you must mix in many subtle variations of hue and tone. It often doesn't matter exactly what touches of colour you add into the basic finish, they just need to appear discoloured and varied if they are to appear believable. Nor am I necessarily talking about weathering, which is another good excuse to introduce even more variation of colour. A quick way of getting variation into any of these finishes is to start by painting them all wildly varied and blotchy colours, and then apply washes of just one paint that closely matches the average colour you are trying to achieve. Each wash applied will reduce the impact of the colour contrasts and start to tone down and harmonise the finish. After a few washes almost all trace of the original blotchy finish will have gone. Almost but not quite, you'll be left with something that gives a first impression of being uniform but which isn't quite. Working to tone down and harmonise excessive variation is generally easier than trying to work up subtle variation into a totally uniform finish.

The last topic I wish to very briefly discuss is back-scenes. When a model is on display we don't want to be distracted by fussy wallpaper or the beer-gut of the chap stood behind it. If we can fill our field of view with a two dimensional pictorial representation of the rest of the environment in which the real thing would operate or be seen it can vastly improve our judgment of both the main feature model, and also our landscape or terrain modelling. A model placed in isolation on a shelf or wooden plinth cannot help but look like anything other than a model.



Many people make the common mistake of trying to paint or photograph detailed and complex backdrops, which then distract from the models in front of them. Backdrops need to be simple and often slightly blurred or out of focus so as to suggest the thing we are interested in is in front of the backdrop, not the backdrop itself. In some instances, particularly aviation models, we may require no traditional terrain modelling at all, just a backdrop of clouds and sky. Other subjects may require a more clever approach to subtly blending the three dimensional terrain or landscape into the two dimensional backdrop without there being an obvious or clumsy transition from one to the other.

Well that's very quickly raced through an enormous topic. I know I won't have answered all the questions that people have on this vast subject, but I hope you feel it was worth reading nevertheless. Like all the artistic aspects of model making, the important ideas have nothing to do with specialist materials or techniques for manipulating them. It's all down to good old fashioned observation, something that can only be improved through practice.

