

# Education Program Basic Skills Series



## Module Seven Scenery

The following pages introduce the essential elements of model railway scenery

- Buildings
- Growing things
- Living things and vehicles
- Land forms
- Railway track formations
- Scenery support and surfacing
- Back scenes and view blocks

## Buildings

On a model railway buildings include all the structures on the layout like; stations, signal boxes, shops, hotels, chook yards, out door dunnies etc. Models of these structures are available in order of complexity as completely finished ready to install, plastic kits, printed card kits and laser cut wooden kits.

### Completely finished ready to install

The moulded resin models such as the OO scale one from Hornby's "Scaledale" range pictured above right are fully assembled and painted ready to place on your layout.

### Plastic kits

There is a wide range of plastic kits available for British, American and Australian buildings. These kits require assembly and in some cases painting to complete them. The photo on the left shows an assembled HO scale Atlas signal box kit

### Printed card kits

British manufacturers market a wide range of printed card kits. These pre coloured kits need assembly. The models pictured were built from the SuperQuick OO scale signal box kit. While of the buildings modelled are British the models with slight modifications are often suitable for Australian scenes.



### Laser cut wooden kits.

Laser cut kits consist of sheets of laser cut plywood. You need to remove the parts from the plywood sheets to assemble the model. The kits require assembly and painting.

### Customising your buildings

You can customise model buildings, especially kits to suit the space available and your needs. This is also known as "Kit Bashing".

# Living things and vehicles

The trees, bushes, grass, weeds, live stock and people in our scenery help bring the scenes to life.

## Trees

Trees are rather large. A typical forest tree is over twenty metres tall. Most model trees are rather smaller to prevent the trees overpowering the scenery. The commercially manufactured HO scale trees pictured are 100 mm tall. Model trees are available as kits or finished models ready to plant.



## Bushes

Bushes to this botanical ignoramus are anything between trees and grass. They can be in clumps or used as hedges. Model bushes are available as kits or finished models ready to plant.



## Grasses

Grasses are abundant covering most of the surface of the ground except beneath trees. Model grass is available as mats, ground foam, and dried sawdust. These materials are applied over areas of the layout surface coated with diluted white glue.

## Weeds

Weeds may be the bane of the gardener but in my experience are easier to grow. Weeds can be modelled by adding some coloured ground foam to the grass coloured ground foam “grass” before “planting”. Some purple “Paterson’s Curse” in the grass on a hill side would be typical of Australian pastures.

## Live stock

Model live stock provide a reason for the stock cars on your freight trains. Model live stock is available in a variety of scales.

## People

Model people bring your layout scenery to life. They also provide a scale. The signal man beside the track handing up the staff to the train crew emphasises how big your trains are. Model people in a variety of poses and garbs are available in a variety of scales.



## Vehicles

Our model world would be incomplete without vehicles. Model vehicles are available in a variety of scales.

Many of the die cast ranges such as “Matchbox” are not made to a specific scale. A good guide to the size of trucks is their width. Highway trucks are about 2,500 mm wide or 16 mm in N scale, 29 mm in HO scale, 33 mm in OO scale and 52 mm in On30.



## Land forms

The shape of the scenes we model depends on the location modelled. Modelling these locations require a trip to photograph the scenery or a literature search for photos of the area. The key feature of any specific land form is the colour of the rocks and soils.

In the Sydney area flat topped scrub covered plateaus are cut by gullies and gorges. Massive sandstone outcrops interspersed with trees and scrub form the sides of the gullies and gorges. The predominant colour of the sandstone is grey tinged with yellow ochre. Exposed rock outcrops are stained dark grey with bacterial growth on the weather exposed surface of the rock. The soil on the ridges is a light grey colour. The view on the upper right is of the Burrogorang valley in the Blue Mountains west of Sydney.

On the north west plains of New South Wales the plains are ringed by chains of forest covered extinct volcanos. The steep cones of the volcanos are topped in some cases with the weathered remains of the volcanos core. In contrast the plains at the foot of the volcanos are flat. The volcanic core outcrops are brown to pink. The soil on the surrounding plains is nearly black. The photo shows the rugged profile of the Nandewar range as seen from the plains to the west of the range.

The New South Wales southern highlands are a succession of rounded eroded granite ridges. The granite outcrops are pink stained with lichens. The soil is light brown. The photo below shows a view in the Bowral area.



Desert scenery land forms are essentially the same as temperate region land forms with much less foliage. The lower photo shows the Pilbara region after rain has made the desert bloom.

# Railway track formations

## Earth works

Railway track formations are cut into or built on the existing terrain.

The slope of cutting walls depends on the material they are dug into. Cuttings in sound rock as shown in the photo can have vertical walls. Cuttings into clays typically have wall slopes of around 30 degrees

Embankments are built up typically of the materials dug out of cuttings. Typical embankment wall slopes are around 35 degrees. Using retaining walls can avoid the need for embankment wall slopes.



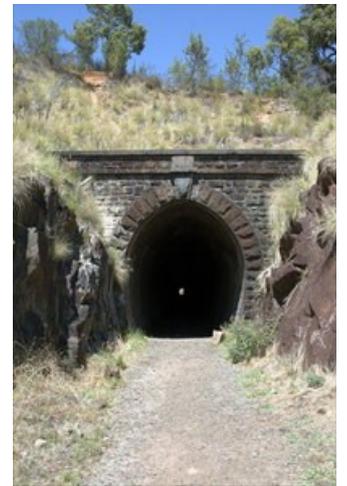
## Drainage

Railways often cut across natural drainage channels. The drainage flows need to be allowed for by culverts and if required, bridges.

## Tunnels

Ridges too tall for cuttings require tunnels. Tunnels on your model railway are a convenient method of framing a scene or disguising the all too small space your layout occupies.

Tunnels in hard rock can be simply blasted out of the rock. Tunnels in softer materials require lining with timber, stone, brick or concrete. The roof and tunnel walls of line tunnels are usually curved to distribute the load on the tunnel from the surrounding soil and rock the tunnel has been driven through. Tunnel mouths are usually made from the same materials as the tunnel lining. The degree of ornamentation on the tunnel mouth depends on the tunnel designer.



## Bridges

Bridges come in all shapes and sizes to cross rivers, roadways and valleys. The type of bridge ought to reflect the railway and era you are modelling.

The timber trestle in the photo would fit into a period or secondary line layout. It would be out of place on a modern main line.



The bridge shown in the attached photo on the BNSF duplication of the Belen Cut-off is typical of modern bridge building techniques.

# Scenery Support

## Carved foam scenery support

Carved plastic foam provides a robust light weight scenery support.

This type of scenery support is ideal for flat bedded terrain such as the sandstone formations of the Sydney area.

The photo shows a ridge under construction. The ridge is a succession of sheets of Styrofoam cut to shape and secured into place with white glue. After the glue has cured the sheets will be carved to break up the ledges into blocky outcrops.



## Thin shell plaster scenery support

Thin shell plaster scenery support is layers of plaster soaked paper laid over a former.

The former can be as simple as a pile of crumpled wet newspaper or formed wire mesh. This type of scenery support is well suited to rolling countryside.

The paper can be Chux, paper towel, (Preferably the non patterned type) or newsprint (The classifieds are more effective at absorbing the plaster than the news sections of the newspaper)

The plaster of Paris is mixed to a creamy consistency so it just coats the paper strip dipped into the mixture. Adding the base colour of your scenery to the plaster mix prevents white showing through when the scenery gets chipped or cracks.

The paper cut into 100 mm by 200 mm strips is dipped into the plaster mix and laid over the former. The paper strips are overlapped until the plaster soaked paper layer is around a couple of millimetres thick.

The photo shows partially built thin shell scenery supported on a wire mesh former.



# Basic scenery surfacing

## Plaster of Paris coating

Coating your scenery support with a brushed on coating of plaster of Paris provides a good basis for detailing your scenery. Plaster of Paris once set is rock so it looks like and has the texture of real rock. The plaster of Paris allows you to show the bedding (if appropriate) of your rock outcrops. Brushing the plaster on the the direction of the rock strata shows the bedding of the rock. Adding a small amount of cement colouring oxide to your paster mix gives your scenery its basic colour. The scenery pictured represents the sandstones of the Sydney basin. The plaster was coloured to the typical colour of freshly broken Sydney sandstone.



## Acrylic paint washes

Once set the plaster of Paris coating on your scenery provides an absorbent surface ideal for colouring your rock outcrops with thin washes of PVA paints. Typical colourings for scenery are the earth colours; Raw Umber, Burnt Umber, Raw Sienna, Burnt Sienna and Yellow Ochre. The photo shows the effect of acrylic washes on the plaster coated Styrofoam scenery.



## Zip Texturing

This method developed in the 1960s allows you to add basic soil and grass to your scenery. Plaster of Paris dry mixed with cement colouring oxides makes ready to apply soil and grass. Brown, yellow and green cement colouring oxides will let you blend soil and grass coloured plaster mixes to suit the scenic effect you need. Wear old clothes while handling the colouring oxides. They don't readily wash out of clothes.

Spray your scenery with water to wet the surface. Sift the coloured plaster from a fine sieve onto your dampened scenery. The dry plaster mix reacts with the wet scenery surface setting the plaster. The "soil" only lands where it should due to gravity. This helps bring out the shape of your scenery. Repeat the process with the "grass" and you have reasonable basic scenery. The bottom photo shows the zip textured basic scenery.



The bottom photo shows the zip textured basic scenery.

## Back scenes and view blocks

Back scenes and view blocks frame the scenes on your model railway.

### Back scenes

Back scenes do more than prevent things falling over the back of the layout. The back scene limits your view by restricting what you can see. This is especially relevant if your layout does not fill the whole room. Back scenes can be just a sky coloured back drop behind the scenery or can have a scene painted on it.

The back scene should give a sense of distance by being less distinct than the scenery in the foreground.

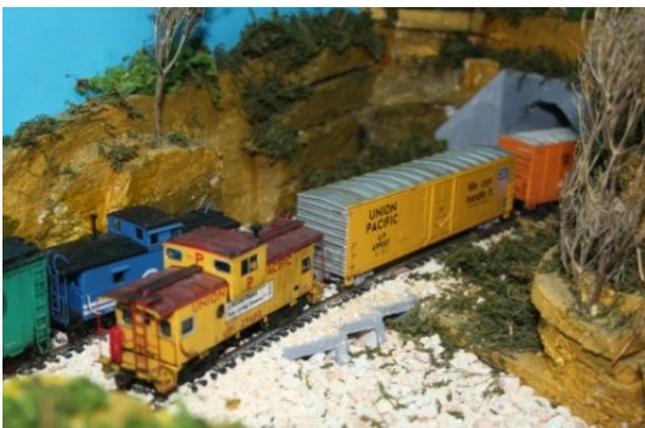
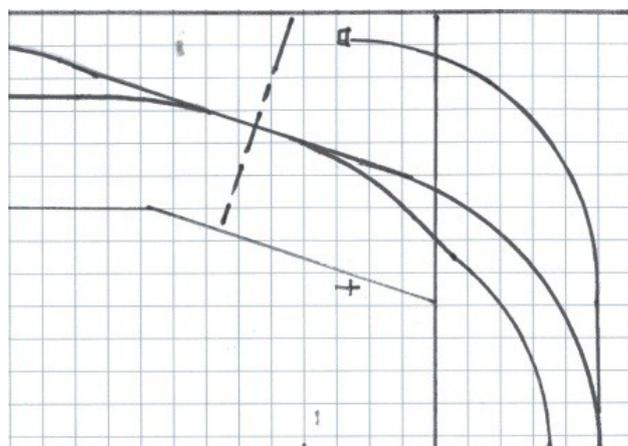
The two photos are of the same location on a layout, before and after installation of the back scene. The corner of the room has been disguised by an angled infill to prevent shadows. The back scene in the lower photo is sky blue cardboard sheet purchased from the local newsagent laid along the wall and infill and secured with double sided tape. This back drop has been in place since 2009.



### View blocks

Free standing double sided back scenes or scenic elements such as a line of buildings or a ridge provide view blocks to break up your layout into scenically different but adjacent scenes.

The track plan attached shows a view block as a dotted line. The two photos show the scene either side of the view block. The tunnel visible in one photo is 85 mm long. The alignment of the tunnel prevents layout operators seeing through the all too short tunnel.



## References

NMRA (AR) web site Clinics

- Lightweight Scenery (Lyndon Spence)
- Modelling Australian Landscapes (Geff Knott)

NMRA (AR) DVDs

- DVD 2094 Scenery & Bridges 1 (Siskiyou Line Vol 4 – Joe Fugate)
- DVD 2094 Scenery & Bridges 2 (Siskiyou Line Vol 5 – Joe Fugate)
- DVD 2119 Scenery Clinic (Woodland Scenics)
- DVD 1129 Rocks and basic Scenery Made Easy