

CIGAR BOX DIORAMAS



A "How-to-do-it" Handbook

by ARMINTA NEAL

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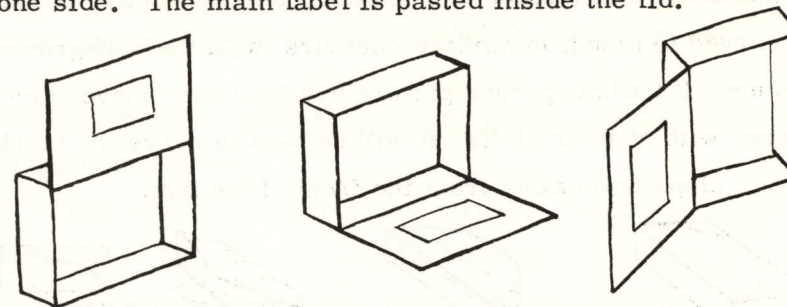
YOU WILL NEED...

cigar boxes
scissors, small X-Acto knife with #11 blades
Tri-Tix rubber cement, Elmer's glue
black construction paper, index cards or similar
weight cardboard
paper clips
small palette knife or spatula
spray cans of paint, black rubber-base paint
piece of plate glass about 12" square

In addition, you are apt to need...

Pliobond cement (manufactured by Goodyear)
tooling aluminum or copper (from craft or hobby shops)
Balsa wood in 1/2" and 1" thick boards, or slabs of
styrofoam plastic. Balsa wood from
hobby shops; styrofoam from florists,
ten-cent stores, or insulation companies.
assorted twigs and dried weeds, collected in the Fall
sawdust sifted into fine, medium, and coarse grades
"Rit" or "Tintex" dye -- greens and browns
lichen (from model railroad shops)
gravel and fine sand
nut picks, leather modelling tools, dental tools, etc.
assorted jars with lids, cans, other mixing containers
paper mache mix (explained in text)
model kits, novelties, souvenirs, post-cards, etc.

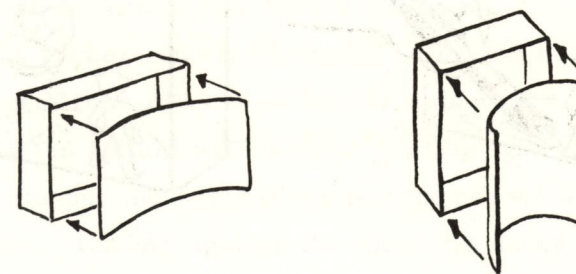
The box can be designed with the lid to open up, down or to one side. The main label is pasted inside the lid.



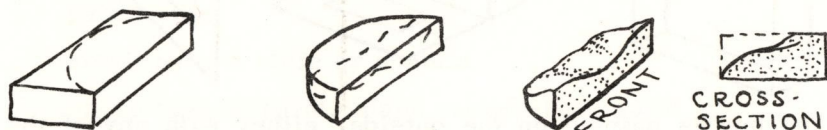
The box is painted on the outside, either with any of the rubber-base (latex) paints, or with paint from a spray can. The inside of the box is given one or two coats of the black latex paint. (Other flat black paints may also be used.)

Be very sure to wash any brushes that are used with the latex paint very soon after use. Use warm water and bar soap (such as Ivory). Once the rubber-base paint hardens there is little that can be done to restore the bristles.

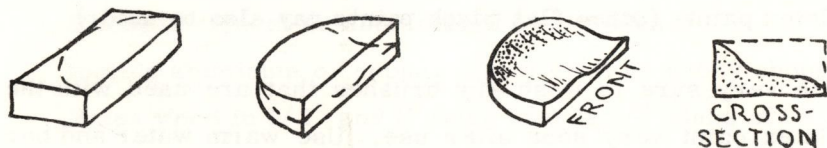
A piece of black construction paper is cut to fit the box interior in a curve from one side to the other. The magazine picture or large post-card you are using for the background is pasted to the construction paper, using Tri-Tix rubber cement. Then this curved paper is pasted to the box.



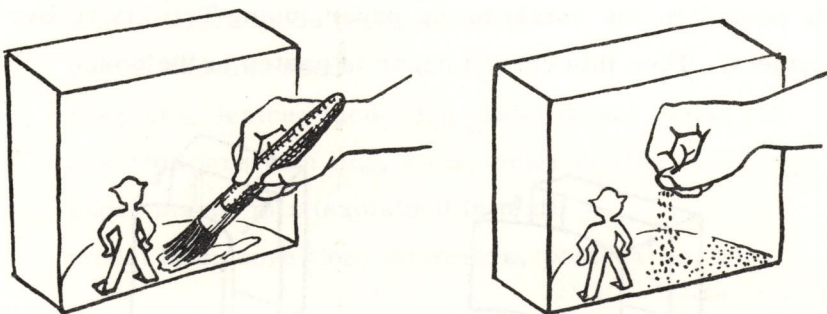
If it is desired, a foreground base can be made with a block of balsa wood or a piece of styrofoam plastic. The material is carved to blend, in surface contours, with the background picture. If the background picture has land with uneven contours, with hills or bluffs, it will be best to carve the block with a slope down away from the front of the box.



If the background picture shows a low, level, flat area, the foreground block should be carved sloping up at the back.



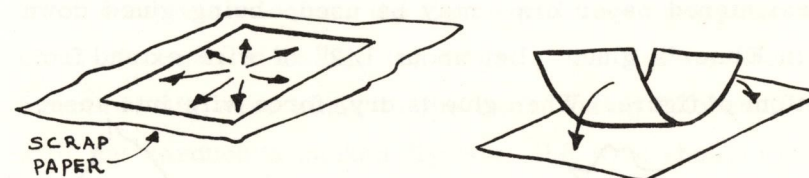
If a flat base is desired, Elmer's glue is brushed on the bottom inside of the box and sand, gravel, dyed sawdust or other texture is sprinkled on the wet glue, after the figures are glued in place.



The foreground is made from cut-out pictures or from figures and accessories from hobby shops, ten-cent stores or other sources.

There are two methods of using magazine pictures for the foreground figures:

(1) Paste the pictures to index cards or cardboard of similar weight. Use Tri-Tix cement. Put the picture face down on scrap paper; brush or spread a thin but complete coat of Tri-Tix on the back of the picture. Work from the center out, in radiating strokes.

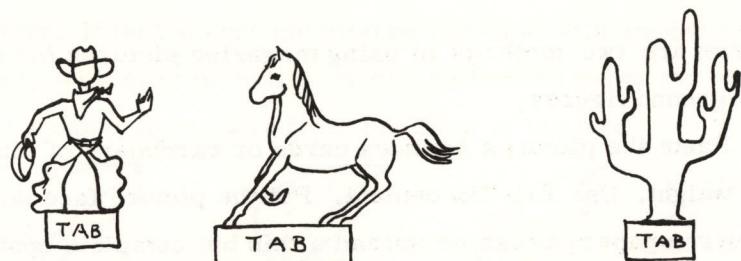


Turning the picture over, place the center of the picture down on the cardboard. Smooth down from the center out. Place piece of waxed or scrap paper over picture, roll down with a linoleum brayer or rolling pin. This helps to remove all air bubbles.

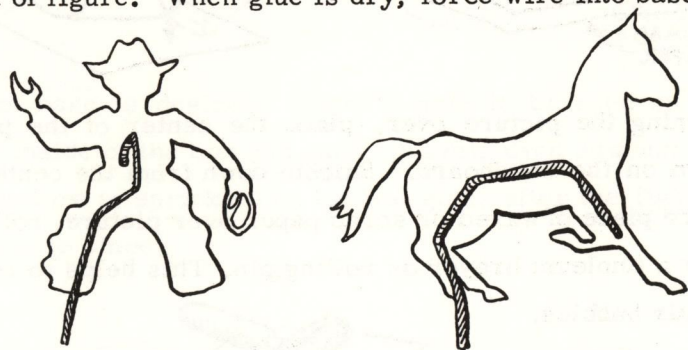


Let cement dry completely before trimming picture. When the excess rubber cement (squeezed out on the scrap paper) has changed from milky white to a translucent material, the cement on the picture will be dry. Cutting against the plate glass, trim out the parts of the picture needed with the X-Acto knife. Cutting against the glass produces a cleaner edge than against a different surface.

If your foreground is the flat side of the box, without carved balsa or styrofoam block, leave tabs on the bottoms of the trimmed figures. Fold these tabs back and glue to base.

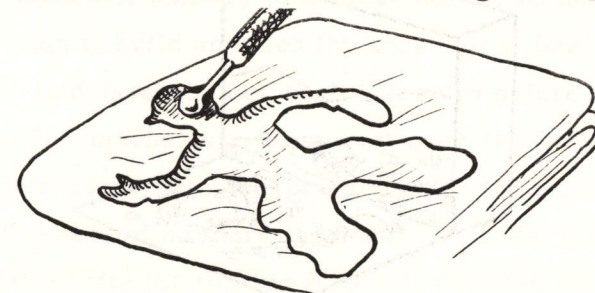


If your foreground is of carved balsa or styrofoam, trim out figure completely, then glue supporting wire to the back. Straightened paper clips may be used, being glued down with Elmer's glue. Let about 1/2" of wire extend from bottom of figure. When glue is dry, force wire into base.

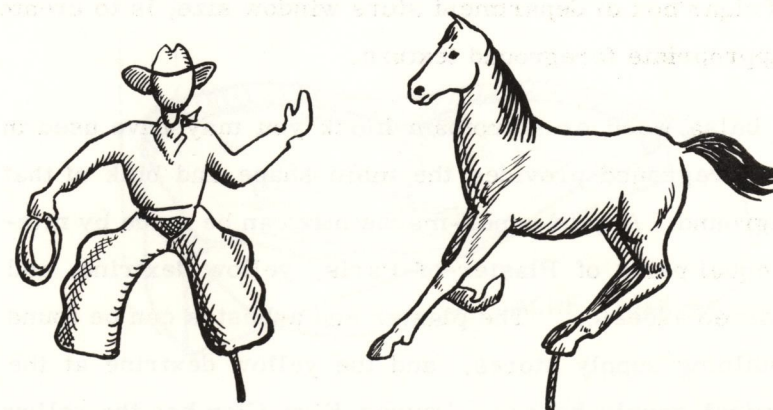


(2) The second method of using pictures is to glue the picture to a piece of light weight (tooling) aluminum or copper (about 32 oz. weight). Brush Pliobond on the back of the picture, smooth picture on aluminum or copper. Press out all air bubbles. The Pliobond holds immediately; there is no need to wait. Use scissors to cut out the picture. Manicure scissors will help in small areas. Narrow strips, such as the legs of animals, will curl, but the Pliobond will hold the paper tight, and the metal can be straightened.

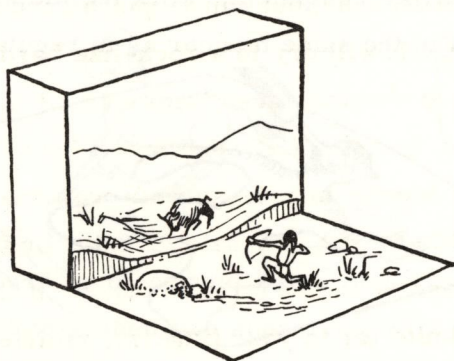
Fold a rag or smooth-finish hand towel (not terry cloth) into a soft pad. Place trimmed picture face down on pad. Using a dental tool, rounded end of a nut pick, leather modelling tools or similar equipment, work the metal into a rounded form. Tool in the same manner as in regular copper work.



When completely tooled, the figure will have an appearance similar to that of bas-relief. Again, the figures are reinforced with wire glued to the back, using Pliobond. As with the cardboard backed figures, the wire should extend about 1/2" from the bottom of the figure. The figure is fastened in the same manner, by forcing the wire into the base block.



If the foreground figure does not stand higher than the cigar box is deep, it may be placed on the lid of the box, and the background material carefully located so that the lid will still close.



ACCESSORIES

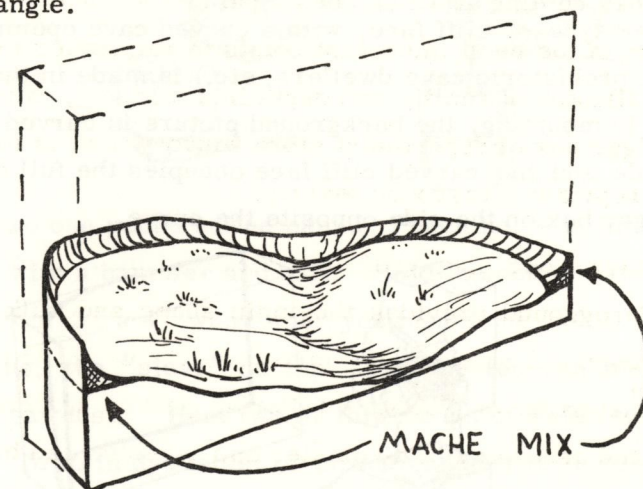
Ground:

All ground has texture, whether it is a pine-needle blanket-ed slope or an asphalt pavement. The surface beneath our feet looks nothing at all as does a painted surface. So it is, that one of the most important points to remember in creating an illusion of reality and depth in a diorama, whether it is of cigar box or department store window size, is to create an appropriate foreground texture.

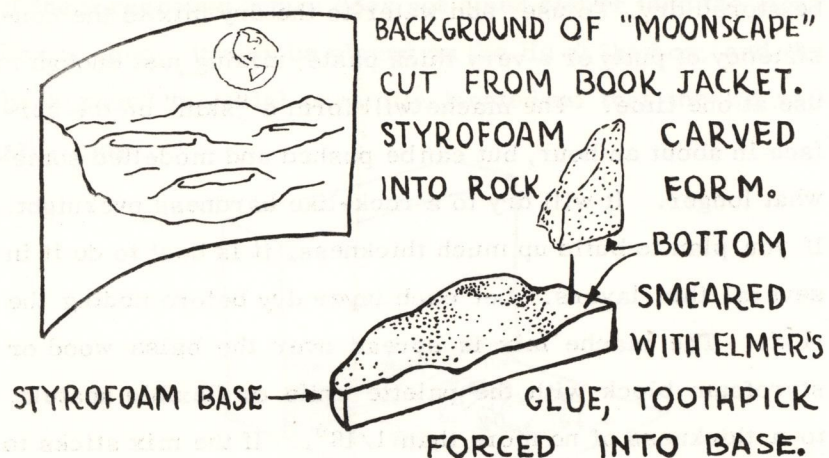
The balsa wood or styrofoam block you may have used in your foreground provides the main shape and bulk of that foreground. A good paper-mache mix can be made by mixing equal parts of Plaster-of-Paris, yellow dextrine, and powdered asbestos. The plaster and asbestos can be found in building supply stores, and the yellow dextrine at the chemical supply houses. Denver Fire Clay has the yellow dextrine in Denver. Put these three dry ingredients in a jar and shake them until they are well distributed. The mix can

be stored dry. To use, add water to the dry mix to the consistency of putty or a very thick paste, mixing just enough to use at one time. The mache will form a "skin" on the surface in about an hour, but can be pushed and modelled somewhat longer. It will dry to a rock-like hardness overnight. If you plan to build up much thickness, it is best to do it in several thin layers. Let each layer dry before adding the next. The mache mix is spread over the balsa wood or styrofoam block with the palette knife or flexible spatula, to a thickness of no more than 1/16". If the mix sticks to the palette knife (or to your fingers), moisten the knife just a little, and the material will not stick.

The mache can be used to make a smooth joint between the foreground block that slopes up at the back and the picture background. Try to make this joint a smooth curve, not a sharp angle.

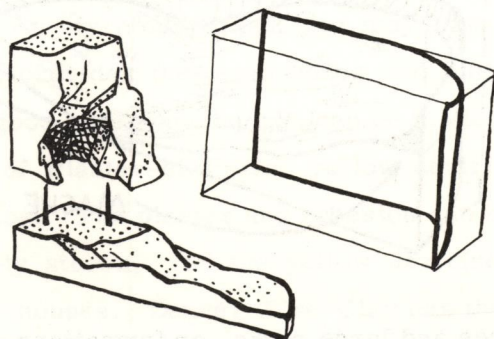


Cliff faces and large rocks, or formations such as those in a "moonscape", can be carved from styrofoam chunks. The blocks or chunks are fastened together by using wooden tooth-



picks and Elmer's glue. The complete foreground is then covered with a layer of the paper mache mix to hide the obvious plastic texture. Again, Elmer's glue is brushed on and the "rocks" are given a texture with fine sawdust or sand.

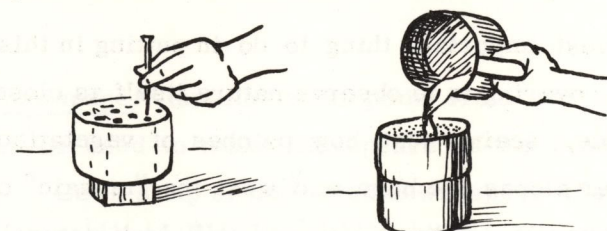
Another type of cliff face, with a carved cave opening (for bears, prehistoric cave dwellers, etc.) is made in the same way. In mounting, the background picture is curved on just one side and the carved cliff face occupies the full depth of the cigar box on the side opposite the curve.



The same covering of mache, glue, and texture finishes this foreground.



If grass-like "weeds" or plants are to be shown in the foreground they can be made of hemp rope cut and pushed into the wet mache mix. Dye the hemp green with "Rit" or "Tintex" before using. The adhesive quality of the mix will hold the strands securely. When the mache mix has dried to a rock hardness, the ground is painted with a thick coat of Elmer's glue and sprinkled with a generous layer of varying textures and colors. Very fine sawdust already dyed a bright green is available at model railroad shops as model railroad "grass". If you prefer a less brilliant color, you may dye sawdust with the Rit or Tintex.



Take two one pound coffee cans. Punch holes in the bottom of one with a hammer and nail. Hold the coffee can against a scrap of 2" x 4" wood when you punch the holes. Set up the cans, the "sieve" on top. Fill the top can about half full of sawdust. Heat two or three cups of water to boiling point. Drop in dye tablet or powder and let it dissolve.

Pour hot dye over sawdust. The dye can be poured through the sawdust as many times as is necessary to get the depth of color desired. Spread wet sawdust out on newspapers to dry.

It is a good idea to dye several batches with different greens and browns, and to sift the dried sawdust through a piece of window screen, then a kitchen sieve, to get fine, medium and coarse grades. A different texture can be made by grinding up a 1/4" wooden dowel (available at hardware stores or lumber companies) in a clean pencil sharpener. When you glue the sawdust -- or fine sand -- or any other texture to the base, vary the color and the texture. Use some light green and some dark, and add a little brown or tan of a finer texture than the green, to resemble dirt showing through the grass. Gravel ranging from BB shot to garden pea size can be used for larger rocks. It is also a good idea to use coarse textures near the front of the box, fine textures at the rear, to approximate a correct textural perspective.

The most important thing to do in putting in this dirt and grass covering is to observe nature itself as closely as it is possible, seeing just how patches of vegetation grow -- whether slopes are bare and what the "mosaic" of dirt and greenness is. The foreground will look natural only if it is based on observed knowledge of the actual relationships in nature.



Bushes and Shrubs...

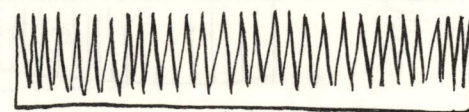
can be made with the previously described hemp method and by using lichen from model railroad shops, dried weeds and

twigs, fern-like material (actually a kind of seaweed) usually sold at Christmas time by ten-cent stores, by using cut paper and any other material that appears appropriate. Sponges are not recommended. Somehow, they always resemble nothing but sponges.

Lichen can be torn into little clumps and fastened to the base with Elmer's glue.

Dried weeds and twigs can be dipped in Elmer's glue, then sprinkled with or dipped into the dyed sawdust to get a different texture in a bush. If you have cut tiny scraps of colored paper, these can be spotted on the lichen or dried weed bushes to resemble flowers. A toothpick will help to put just one drop of glue on the bush -- and the same glue-dipped toothpick will then pick up the fleck of color to put it in place.

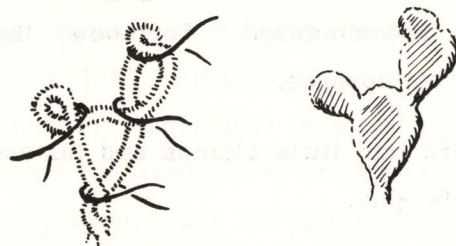
Unprinted newspaper (available in pads from art supply stores) can be used to make the spears at the base of a yucca tree. Cut a strip of unprinted newspaper. Slash it.



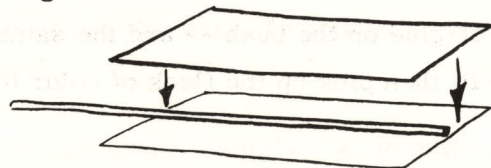
Roll up strip tightly and spread Elmer's glue along bottom of strip as you roll. Bend outer layers down to make proper shape.



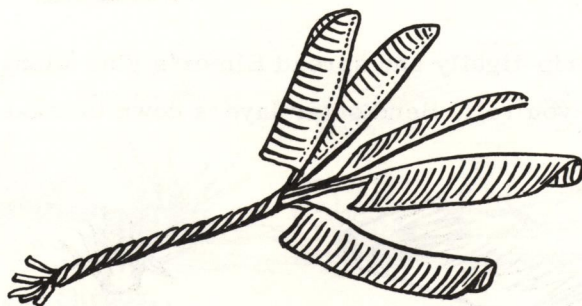
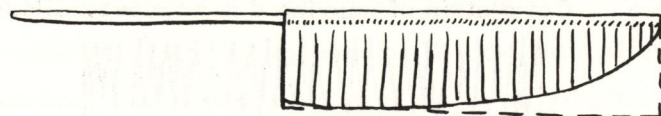
Prickly pear cactus can be made with pipe cleaners bent into correct outline, tied with thread, then the outlines filled in with the paper mache mix.



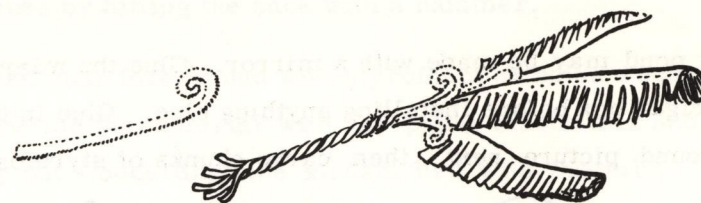
Ferns and palms are made by gluing a wire (get a spool of 22 or 23 gauge wire from a hardware store) between two lengths of gummed paper tape. Let wire extend beyond paper tape for length of stem or trunk plus the usual 1/2" for pushing into the base.



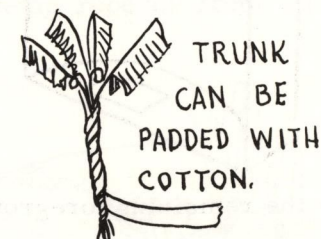
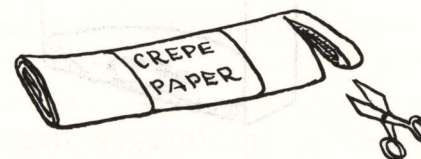
Bend paper over, trim, then slash. Make several, then twist wire "stems" together.



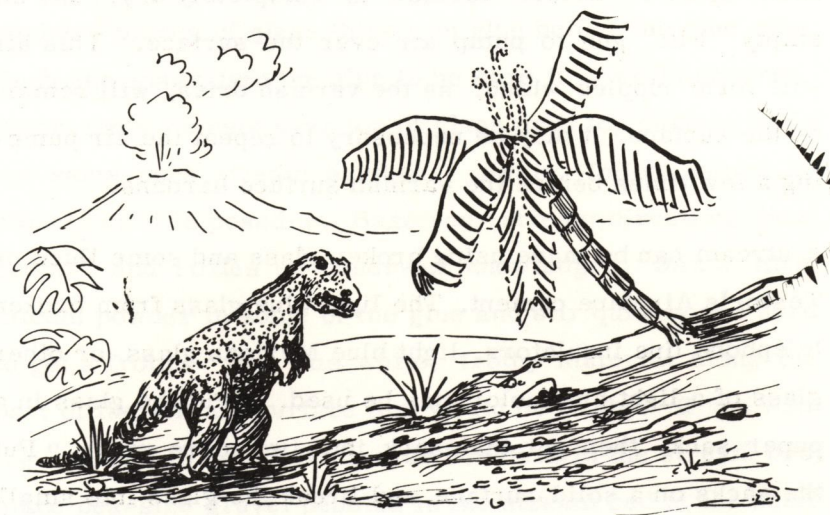
Paint fronds with poster color, water color, or latex white with casein colors.



If "fiddlenecks" are required, they can be made from pipe cleaners and twisted in with the wire stems of the fronds.

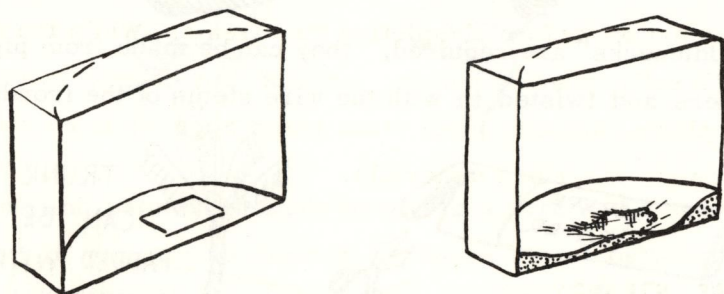


Wrap stems with 1/4" or 1/2" strip of brown crepe paper cut across grain of package, and fastened with library paste or Elmer's glue. Bend wire "fronds" into proper shape. Drill or punch hole in base. Smear base of tree and hole with Elmer's glue, mount tree in place. Glue dirt or grass in place at base of tree.



Water

A quiet pond may be made with a mirror. Glue the mirror to the cigar box before installing anything else. Glue in the background picture next, then carve chunks of styrofoam



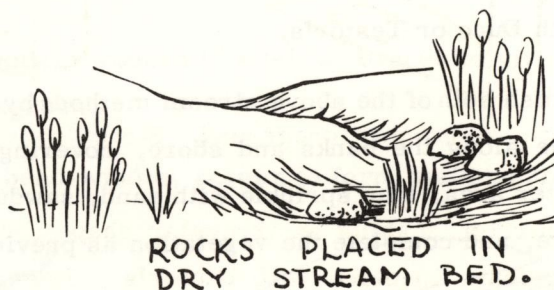
for the remaining foreground. Slope "shores" down toward mirror "pond". Let the edges of the styrofoam cover edges of mirror, making an irregular shape for the pond. Glue styrofoam in place with Elmer's. For added realism, ripples may be added to the mirror surface, using clear varnish and oil paints. Mix a tiny bit of Prussian or "Thalo" blue with some clear varnish. Use just enough to tint the varnish. Flow varnish on surface of mirror, to a depth of about $1/32$ ". Before varnish is completely dry, use an empty "Flit" gun to pump air over the surface. This air will form ripples which, as the varnish dries, will remain on the surface. It may be necessary to repeat the air pumping a few times before the varnish surface hardens.

A stream can be made using broken glass and some Duco or Testor's Airplane cement. The light blue glass from broken telephone line insulators, light blue Mexican glass or other glass of a light blue color may be used. Put the glass in a paper sack, then put that sack into two more sacks. Put the sacks on a solid surface and break the glass into small

pieces by hitting the sack with a hammer.

Make your foreground with styrofoam or balsa wood chunks, covering the material with the paper mache mix and working out (modelling) the stream bed with the mix. Let the mache harden before completing the stream. While the mix is still soft, push in weeds, cattails, any correct stream-side plants, making them from hemp rope or from other previously described materials.

ROPE STRANDS
DIPPED IN
GLUE OR
PLASTER FOR
CATTAILS...



When the stream bed is hard, paint the bottom with a blue paint; lighten this blue color as you paint from the bottom toward the sides. Along the banks of the stream, paint in a light brown color. Let the paint dry completely. Squirt a small amount of Duco or Testor's along the stream bottom; sprinkle pieces of glass thickly in glue before the glue sets. Push the glass into the glue to be sure it is well anchored. Squirt more cement over top of glass until top surface looks the same as a stream surface. Again, follow nature as closely as it is possible. Base your stream direction, flow, eddies, and ripples on observed knowledge. Mix a little talcum powder in some of the glue and stir quickly and hard to get a froth. Use this white, frothy material along the part of the stream surface that would be frothy. If you want the "water" to be breaking over boulders in the stream bed, place pea-size gravel pebbles in the stream bed at the same

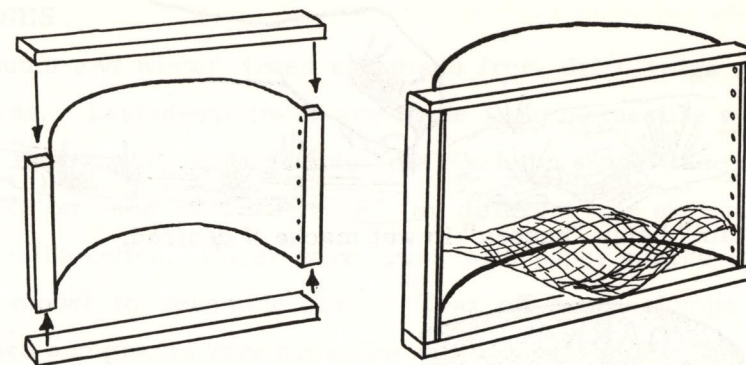
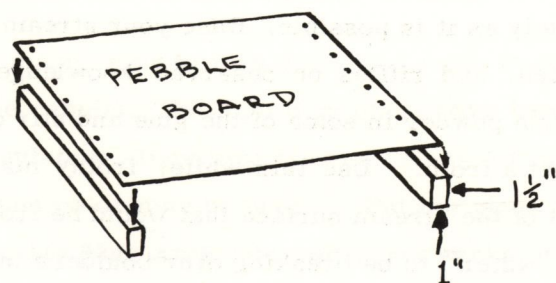
time you place the glass fragments.

Another method for a stream uses aluminum foil and light blue cellophane. Using ordinary household aluminum foil, tear off enough to cover the bottom of your stream area. Crumple the foil tightly, then smooth it out and glue to the base with Duco, Testor's, or Pliobond. Cut a piece of blue-green cellophane to fit over the foil. Crumple the cellophane tightly, then smooth out. Glue the cellophane to the foil with Duco or Testor's.

Finish both of the above stream methods by painting Elmer's glue along the banks and shore, covering the edge of the water area, then sprinkle with sand, sawdust, or other texture, and complete the vegetation as previously described.

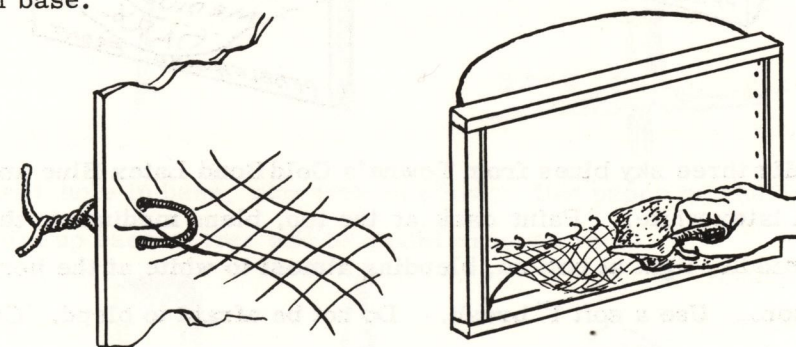
LARGER DISPLAYS

Most of the methods used in making the cigar box exhibits can be used in preparing larger displays, but the immediate problem presented is that of the setting, since there are no standard size boxes of the correct proportions into which to put your foreground material. This is easily solved. Use Elmer's glue and carpet tacks to fasten a piece of pebble-board, matt board, or poster board to two 1" x 1-1/2" wooden supports.



Nail on top and bottom wooden 1" x 1-1/2" braces to give the curve to the background.

Poke, pull, and bend window screen to form main contours of base.

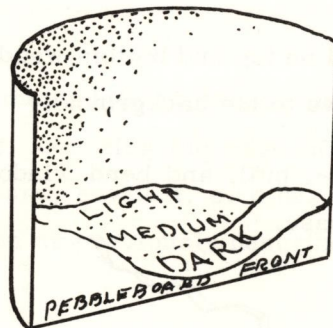
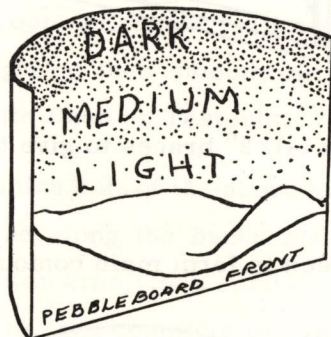


Drill pairs of holes around pebble-board background. Push hairpin shaped wire (stovepipe wire or finer) through screen, through holes, twist tightly in back with pliers.

Spread paper mache mix over window screen with palette knife or spatula. Dry tempera pigments may be mixed very sparingly with mache to give a basic ground color. Smooth joint between screen and background into a curve, not a sharp angle.



"Plant" hemp "bushes" in wet mache if desired.

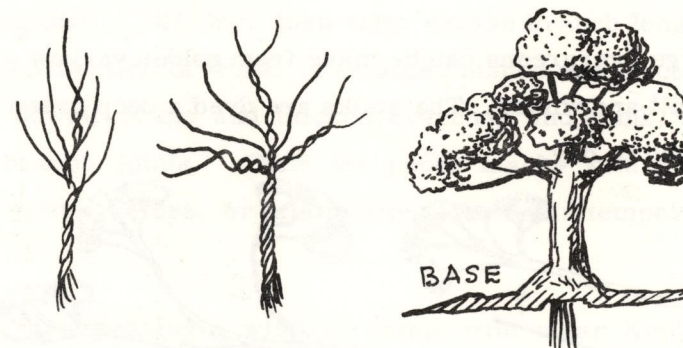


Mix three sky blues from Towne's GoldBond Latex Blue and a latex white. Paint dark at the top, blend medium in the middle, light at bottom, blending almost to white at the horizon. Use a soft 1" brush. Do not be afraid to blend. Cut and glue a piece of pebble-board to fit between the bottom of contoured foreground and base. Use Elmer's glue.

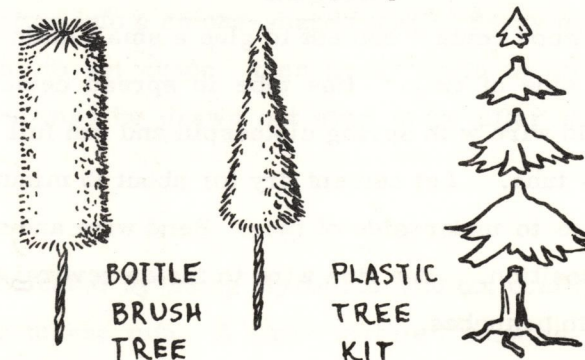
Mix three browns for ground color. Use burnt umber casein tube color with latex white. Paint dark at front of foreground, blend through medium to very light at the background. When paint dries, proceed as with cigar box, spreading foreground surface with a thick coat of Elmer's glue, sprinkling on dyed sawdust, sand, gravel, etc. Bushes and shrubs are made the same way, with lichen, weeds, and other materials.

TREES

Autumn and winter trees are made from dried twigs and weeds. Leafed-out trees are made from clothesline wire and lichen. Twist wire into tree skeleton shape. See art books on "how to draw trees" for different tree skeletons and silhouettes. Cover wire trunk with paper mache mix and model to resemble bark. Tear off small clumps of lichen and glue to wire branches with Elmer's glue. Drape some pieces over several branches.



Drill hole in base, glue tree in place. Use paper mache to build up base of tree and to model exposed roots.

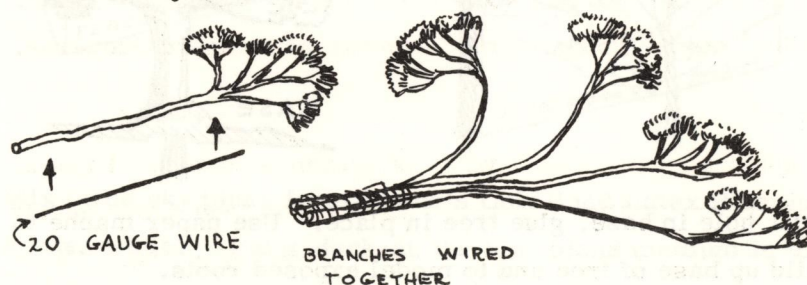


EVERGREEN TREES

Small trees in the distance can be made by trimming bottle or test-tube brushes to the proper shape. Dip tree in green enamel paint, then sprinkle dyed sawdust on wet paint, or

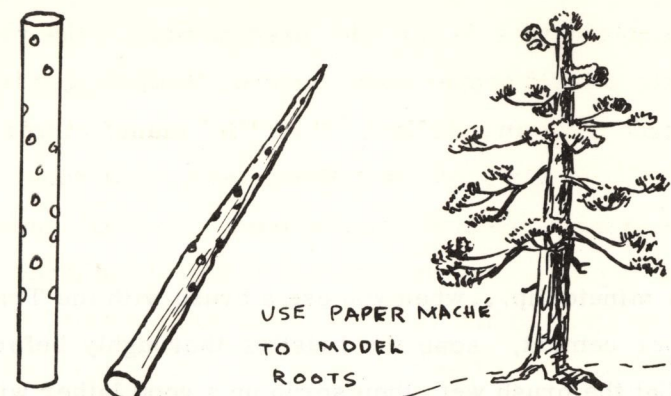
shake paint-wet tree in jar with dyed sawdust. Use paper mache mix to build proper trunk texture. Medium size trees can be made from an excellent "Tree Kit" manufactured by Aurora Plastics Co., of West Hempstead, New York, and available at most model railroad shops. This kit contains graduated sections that are stacked together and glued. It will help to touch up and vary the color. Oil paints will stick to the plastic. These trees are glued to your base with Pliobond.

Large evergreens can be made from golden yarrow gathered in fall and winter. The stalks are dyed a deep green and permitted to dry.



Use Weldwood contact cement to glue a small diameter wire to under side of twig. Use tube to spread cement along twig. Hold wire with spring clothespin and run full length of wire into tube. Let cement dry for about 15 minutes, then press wire to under side of twig. Bend wire and stem into desired position. Use fine wire to fasten several twigs together into branches.

Using a wooden dowel at least 1/4" in diameter (get at hardware store up to 3' long), drill small holes through from different angles. Then, by whittling or sanding, taper the dowel. Poke wire-wrapped branch ends into holes. Anchor



with Pliobond. Let dry, then trim excess branch lengths from opposite side of trunk. Use paper mache mix to cover wooden dowel, shape and thicken branches and trunk, and model branch joints. Paint the paper mache with water colors, poster colors, or latex white with casein temperas.

SMOKE...

is made by spraying a wisp of cotton with clear Krylon. This clear plastic in a spray can is obtained from nearly any art supply house and at most hardware stores. Draw out the cotton into a smoke-shaped wisp. Spray gently with the Krylon to set shape, then spray again to strengthen. The cotton may be drawn out even more after the Krylon has set.

SNOW...

can be indicated by using styrofoam and not coating it with the paper mache mix. A finer textured snow is made by spraying the Christmas spray-can "snow" over the modelled paper mache base, and adding sparkle by glueing specks of salt in place. The spray-can snow is a good material to use in putting snow on tree branches.

One last minute tip...when you use a brush with the Tri-Tix rubber cement, soap the bristles thoroughly before using. Get the brush wet, then scrub up a good lather with Ivory or similar bar soap; squeeze most of the lather out of the brush, but do not wash it out. Then, in its lathered state, use the brush with the Tri-Tix. Wash it out immediately after use. The soap remaining in the brush during the glueing process will make the brush easy to clean.

A final word...

Remember always, that it is not necessary for a person to have trained artistic ability to produce interesting exhibits. Imagination and the ability to try something new are the only requirements. Materials can be found, sometimes, in most unlikely spots...aquarium supply stores, novelty shops. Once one has become conscious of the possibilities, miniature things leap into view from the store shelves, and whole forests of trees can be seen in a weed.

CIGAR BOX DIORAMAS

These little displays can be used in many ways. They are simple enough that a child can make them, effective enough to stimulate interest in the subject portrayed. They can be made by the teacher and used to spark interest in new units or made by the students as projects for the unit. They are useful as follow-up projects after a field trip to a museum, industry, or other place of interest.

One need not be an artist to create interesting and acceptable displays. There are many items available from novelty stores, souvenir counters, or ten-cent stores, which can be adapted to use in the cigar boxes. Pictures clipped from magazines can be used for backgrounds, as can the large picture post-cards now found nearly everywhere.

The person who exercises imagination, seeing space ships in plastic hair curlers and rocket ships in metal pencil protectors, will enjoy making the exhibits and will be able to share the creative experience with others.

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