

## The Stage Crew

The tech crews are the groups of people working on set construction, props, lighting, sound, costumes, and makeup. Generally, a technical director or shop foreman supervises these people, collectively known as the **stage crew**.

The set construction crew creates the **set**, the onstage physical space and its structures in which the actors perform. The set is conceived by a **set designer**, then built and painted by the set construction crew, which may later become the **shifting crew**—those responsible for changing the set from scene to scene.

The properties, or prop, crew is in charge of gathering and organizing **props**—anything actors handle onstage as well as furniture and other items used to enhance the set. Props may be rented, borrowed, bought, or built. In the professional theatre, a **prop master** manages the prop crew.

**Lighting** is any illumination of the set and actors during a performance. It is needed to make them visible, but it can also establish a play's time, place, and mood. The **lighting designer** decides what kinds of lights are needed, where to focus them, and when to turn them on. The lighting crew places the lights and runs them during the show.

The **sound designer** decides what kinds of music and sound effects are needed and whether they should be live or recorded. The sound crew is responsible for collecting, preparing, and running the sound for a performance. The **sound**, or audio, component of a production may include amplification of actors' voices in addition to music and sound effects.

Any clothing an actor wears onstage for a performance is called a **costume**. Costumes are designed or chosen by the **costume designer**. They may be rented, bought, or borrowed. Or, they may be sewn by the costume crew, who is also responsible for keeping costumes repaired and clean from one performance to the next.

In the theatre **makeup** refers to cosmetics and hairstyling, including false hairpieces and false features. Actors use makeup to emphasize facial features so that they stand out onstage or to add age or special qualities called for by the characters. Actors usually put on their own makeup, but when there are many actors or the makeup is complicated or specialized, as in horror makeup, the job may be done by a makeup crew, or makeup artists, supervised by a **makeup designer**.

Although you may be interested in one area of tech work—or in acting directing, or producing—you should familiarize yourself with the work done by all members of the stage crew. The following pages will introduce you to the working spaces and tools of each tech crew, demonstrate some basics in each technical area, and acquaint you with vital safety issues.



## Scene Painting

The painting techniques you use backstage can transform simple platforms into sidewalks or hardwood floors and flats into foliage or marble. These transformations make scene painting one of the most rewarding jobs in technical theatre. In the past, many scene painters mixed their own paints to achieve the color and texture they desired. Today, many theatres buy premixed color paints and concentrate on creating special effects.

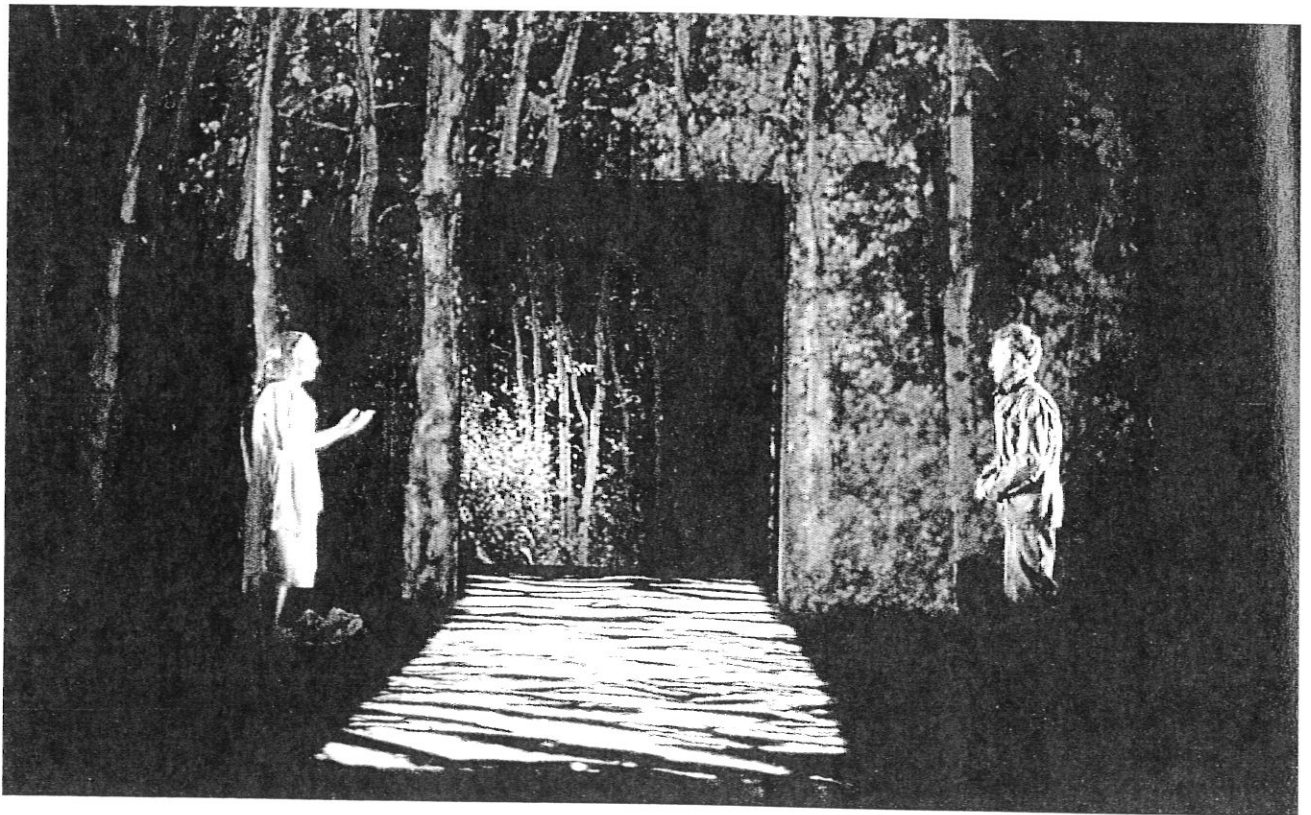
### Preliminary Coats

You will need to apply one or two base coats to most scenery before you paint the effects you want to achieve.

### Sizing

If you are using fabric-covered flats, you will need to **size** them with a preliminary coat of paint if they have not been painted before. A size coat will shrink the fabric slightly and tighten it on the frame. It will also fill the holes in the fabric and smooth it for painting. For a sizing coat, use white interior latex paint and water (at a 2:1 ratio) or water and hot glue (at a 16:1 ratio). By applying a small amount of pigment with your sizing coat, you can see where you have painted.

Painted foliage and lighting create startling effects for this set of Bertolt Brecht's *The Caucasian Chalk Circle*.



## Prime Coat

All scenery requires a **prime coat** of paint to supply a uniform base for the final layer. Some scene painters mix leftover paint from old productions to make a “garbage” paint they can use as a prime coat. Others prefer to use white or black paint.

## Base Coat

The next layer, the **base coat**, is the foundation layer on which you will paint effects. Paint large surfaces from the top down, so you can catch any drips on the way down the surface. Paint doors, windows, and ledges by starting at one end and working your way across. Label or tape off areas with wet paint so other people don't accidentally mar your work before its dry.

### TECH TIPS: PAINTING

- Dip your brush no more than about  $\frac{3}{4}$  of the way into the paint.
- Use cross-hatch strokes to achieve a flat, finished surface.
- To avoid seams in the painted surface, keep a wet edge.
- If you must stop painting before you have finished a surface, feather the edge. Come back to the paint job from the opposite end and work toward the feathered edge.

## Painting Techniques

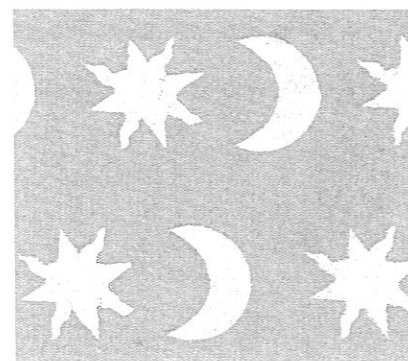
Various painting techniques may be applied to add texture and visual interest to a painted surface. Some of the resulting textures can be modeled with detail brushwork to create the outlines of stone, moldings, and so on.

### Scumbling

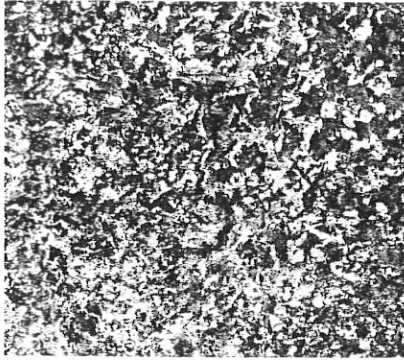
Varying effects can be achieved with the technique known as **scumbling**, which results from the wet blending of several hues in patterns created with any combination of curved or straight brush strokes. Use separate brushes for each color and apply at once or in quick succession. The paint must be wet for the blending, so you must work quickly. Brush across the pattern again with a dryer brush if you want a soft blend

### Stenciling

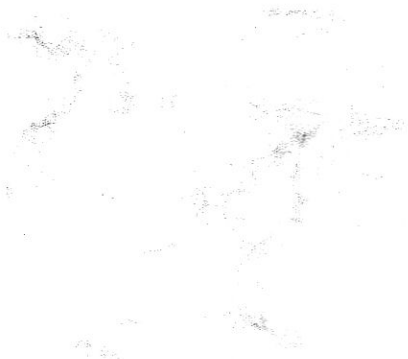
Create wallpaper effects or borders by designing or purchasing a stencil pattern, then painting that pattern onto the surface. To ensure accurate placement, mark a chalk line on the surface using the stencil before applying paint. Be sure to pat the stencil with your brush; brushing can force paint under the stencil.



Stenciling



Stippling



Marbling

## Spattering

In **spattering**, you use quick jerks of a paint brush to fling drops of paint onto a painted surface. You should use at least two colors that are different from your base coat. The first color should be a full shade lighter or darker than the base coat, but of the same hue: if the base coat is light, use a darker shade; if the base coat is dark, use a lighter shade. Your second spatter color should be a color opposite the base color on the color wheel. To make flats look old, spatter with black or gray.

The technique requires you to dip your brush lightly into your first spatter color. Then, standing 3 to 5 feet away from the surface you want to spatter, hold your brush with the bristles up and tilted toward the surface. Slap the brush handle against the heel of your empty hand or a board. Small droplets will fly onto the surface. (For larger drops, use more paint and move closer.) After the first spatter color has dried (usually three or four hours), you can apply your second spatter color.

## Stippling

**Stippling** techniques and effects vary widely. Experiment. Obtain a sea sponge (available at art supply stores) and dip it into the paint. Dab it lightly onto the surface. You apply additional colors in the same manner to accent the pattern. Or, wad up a rag and dip it in the paint. Sweep it gently across the surface in a pattern of small arcs. Using a featherduster for stippling creates interesting foliage patterns. Layer shades and tones of green, brown, and yellow.

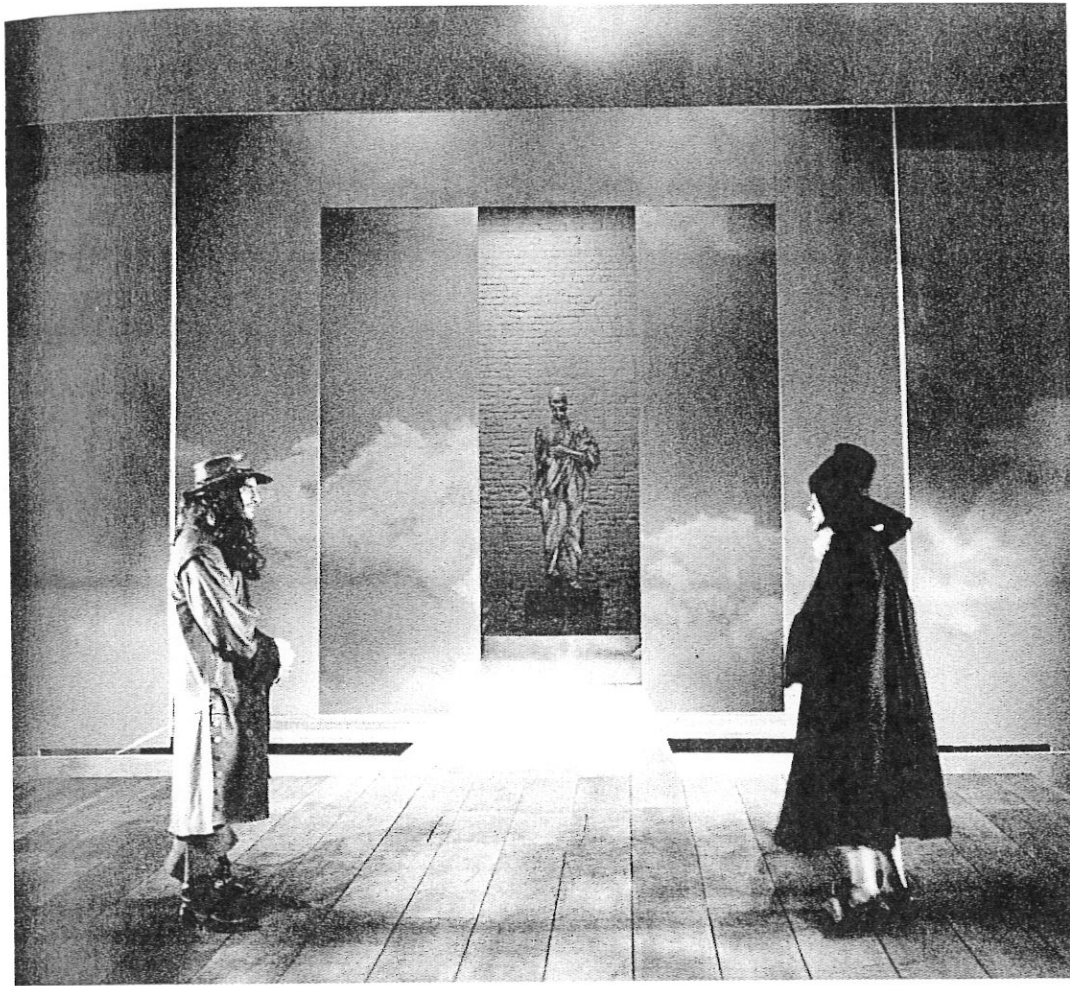
## Marbling

You can simulate marble using a combination of spattering and scumbling. Scumble using a lot of paint in a loose line, then spatter with large drops of paint in the same colors.

## Brickwork

To create the illusion of bricks, you can use a combination of stenciling and spattering, with added detail. Stencil bricks onto a surface painted the color of mortar. Then spatter the entire surface at close range to give it a rough look. Paint a slight shadow under each brick.



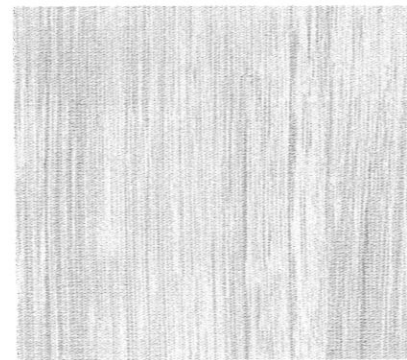


In this version of *Don Juan* by Molière, the simple set is enhanced by painted flats evoking the heavens. What painting techniques do you think were used to create the effect?



### Dry Brush

The **dry brush** technique is commonly used to create wood grain effects. To dry brush, dip your brush into the paint, and then scrape most of the paint off. Use the nearly dry brush to streak dark paint onto the surface. Different hues of brown paint streaked over a wood-color base creates a standard effect. Paint a darker hue over the base, then a lighter hue over that. Be sure to make all your brush strokes in the same direction to simulate the wood grain. Knot holes and paneling lines can be added to complete the effect.



Dry brush

## Scenery Techniques

Set design is an area that is constantly evolving. The trend continues toward abstract and symbolic sets that strike a mood rather than sets that merely recreate reality. New materials, tools, and techniques make possible sets that would have been impractical or impossible half a century ago. Metal, plastics, and materials such as fiberglass and foam are increasingly used in set and prop construction. Cost and safety concerns in working with many of these materials have, however, limited their use to theatres with bigger budgets and better facilities than most high schools have available. Still, amazing sets can be created with traditional materials.

### Three-Dimensional Scenery

Many set designs call for **three-dimensional scenery**, which includes stock units such as platforms and stair units, as well as objects such as buildings, trees, rocks, and other sculptural forms. Three-dimensional scenery is often an interactive part of the set; actors may move around, inside, or on top of a piece of three-dimensional scenery. You should consider the following when designing and constructing three-dimensional scenery:

- How will the scenery be used? Will actors interact with it? If so, how much?
- How does this piece need to be designed to mesh with the style of the play as determined by the set designer and the director?
- What materials should be used? What materials can be substituted for these materials, if necessary?
- How will the scenery be rigged, if necessary (p. 335)?
- How will lighting affect the various dimensions of the scenery?

#### CONSTRUCTING THREE-DIMENSIONAL SCENERY

For most three-dimensional scenery, the following technique is used:

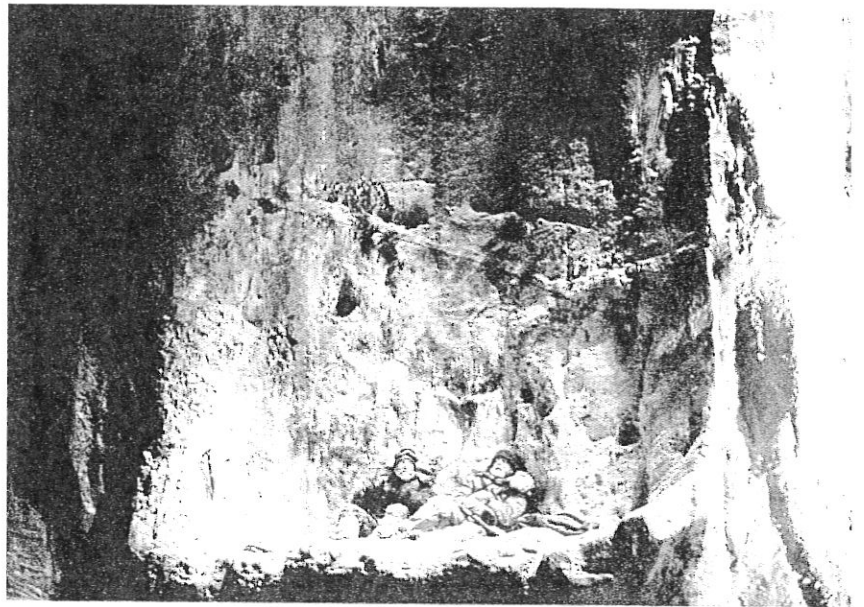
1. Construct a wooden frame in the shape of the object.
2. Wrap the frame in chicken wire. Secure the chicken wire to the wooden frame with staples.
3. Cover the chicken wire with either papier mâché (p. 470) or muslin or canvas dipped in a papier mâché mixture.
4. Trim and cover any remaining loose pieces of wire that might snag or cut.
5. Paint the object in realistic or nonrealistic style, depending on the specified design.



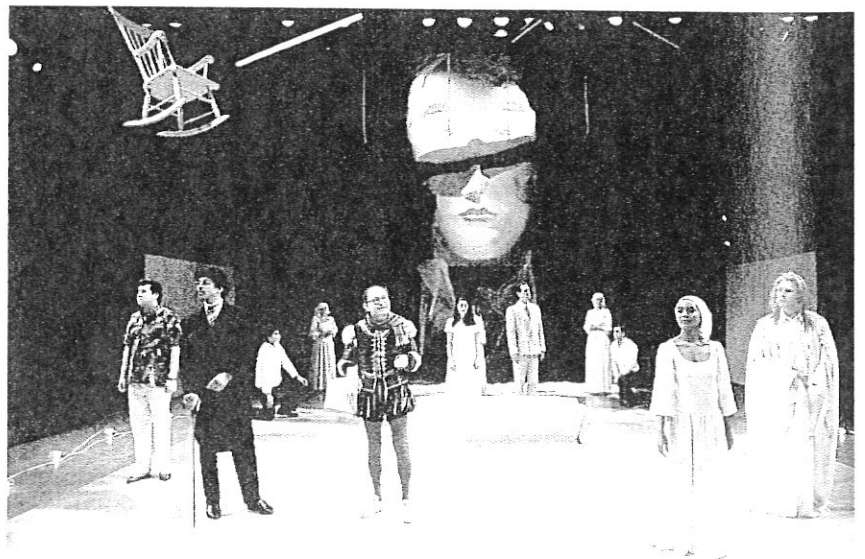
### TECH TIPS: THREE-DIMENSIONAL SCENERY

- Use screws rather than nails to make your wood frame. Many of your boards will be attached at angles, making it difficult to flush the nail heads; you can countersink the screws (screw them in so that the heads are below the wood surface).
- Use twist ties to secure loose sections of chicken wire together.
- If you are using muslin or canvas, or if the object will be handled extensively, include a layer of padding (cotton, wool, or synthetic batting) between the chicken wire and the covering; otherwise, the outlines of the chicken wire will show through.
- Don't forget to apply the appropriate preliminary coats (p. 222) before painting if you are using muslin or canvas.

For Patrick Meyer's *K-2*, which takes place on a ledge in the Himalayan mountains, designer Ming Cho Lee created a set that is realistic but at the same time is symbolic of isolation and the harshness of nature. Plastic foam over a wooden framework form the set, which features an avalanche of artificial snow during one part of the performance.



The set for this production of Shakespeare's *Pericles* includes a large three-dimensional head suspended over the stage. Try to answer the questions posed on page 465 for designing and constructing three-dimensional scenery in relation to this piece of scenery.



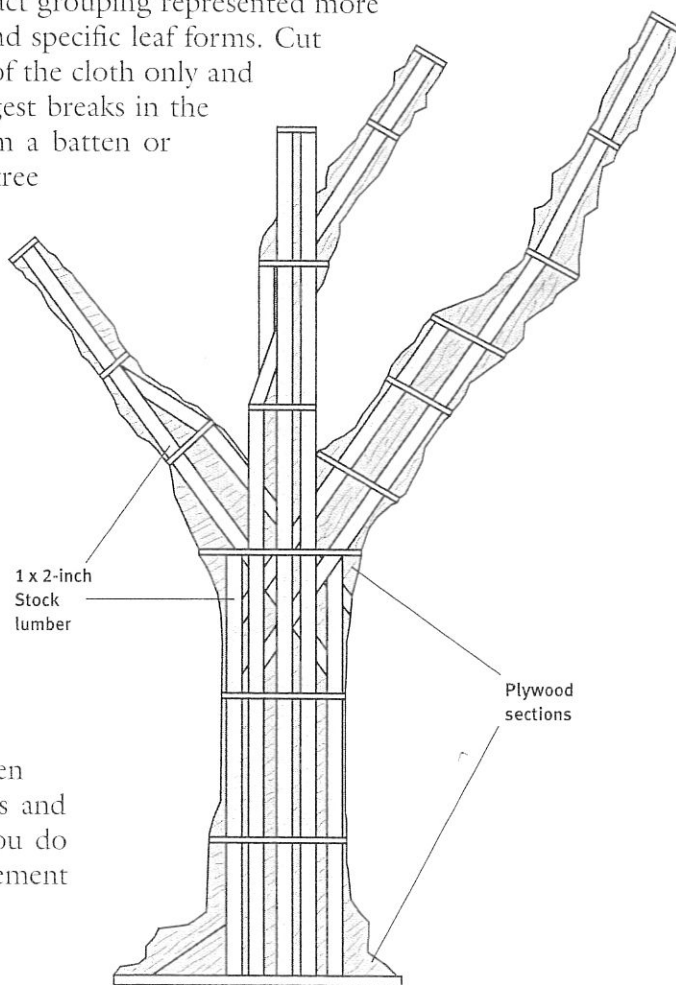
## Trees

One common item of three-dimensional scenery is a tree. To construct a stage tree, use the basic technique for creating three-dimensional scenery described (p. 465). Your wooden frame can be constructed using 1 x 2 stock lumber to build a vertical frame that follows the angles of the tree and attaching horizontal sections of the trunk and branches cut out of plywood to the frame. Your frame will need a base to provide support if your tree is to be free-standing.

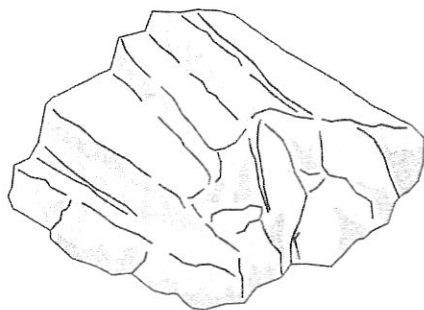
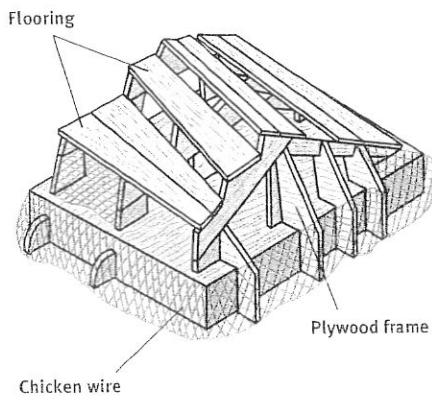
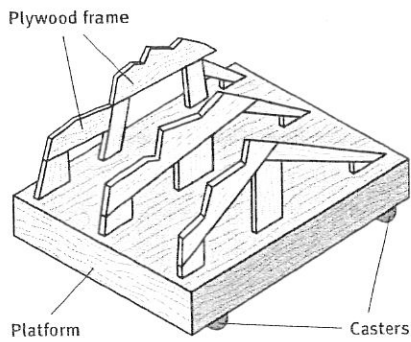
Using one of several different methods, you can create foliage trees and plants. You can cut leaves from felt or painted paper and attach them to the tree or plant using glue or staples. Another method is to stretch a length of cheesecloth between two chairs and paint it with a green gloss paint, or autumn colors if you need autumn leaves. When the paint is dry, cut leaves from the cheesecloth. This method results in leaves that are somewhat shiny and translucent. The cutting and gluing of leaves in these two methods is a time-consuming process. Another option for making tree foliage—and one that takes less time—is to paint the leaves on a large piece of canvas or netting; the leaves can be painted individually, with a stencil, or as a more abstract grouping represented more by color modeling and less by line and specific leaf forms. Cut out the leaf shapes around the edge of the cloth only and make holes in the cloth itself to suggest breaks in the foliage. Then suspend the cloth from a batten or pipe to hang just in front of the tree trunk and branches. This works very well if you have a large number of trees as in a forest, orchard, or garden. This method can be adapted for a presentational or realistic set.

If a specific type of tree is required for the set, consult a book on trees for the correct appearance of the bark and leaves of the tree you are creating. If your set is realistic, be sure that you are representing trees that would actually grow in the geographic region in which the play is set.

If you would rather not build trees, talk to the owner of a local garden center to see if you can borrow trees and other plants to use on your set. If you do this, fill out a written lending agreement with the garden center.

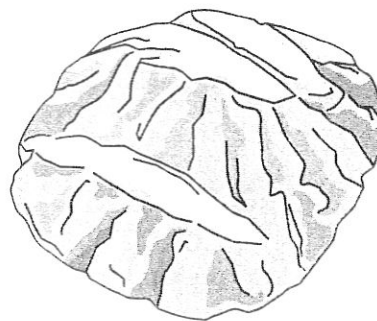
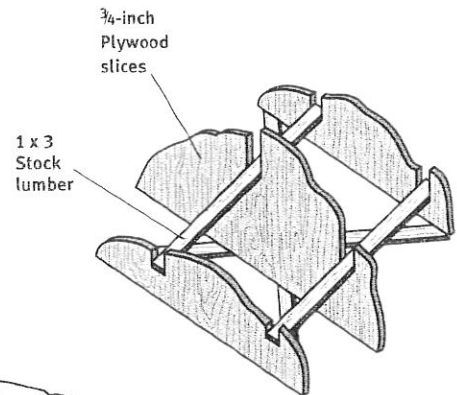






Cover with muslin, papier-mâché, or canvas

Wagon rock



Plywood-frame rock

Stage rocks should look like large, heavy pieces of stone, but they should also be easy to maneuver around the stage. One way to build a stage rock that is easy to shift is to build it on a wagon (p. 335). On the platform, construct a frame using pieces of  $\frac{3}{4}$ -inch plywood; attach pieces that extend beyond the edges of the platform of the frame so your rock isn't rectangular at its base. How the rock is to be used in the production will determine the size of the platform and the shape of the frame. If actors are to sit, stand, or walk on it, there might be some flat surfaces incorporated into the design. Once the frame is built, it is covered as described in the basic process of constructing three-dimensional scenery (p. 465).

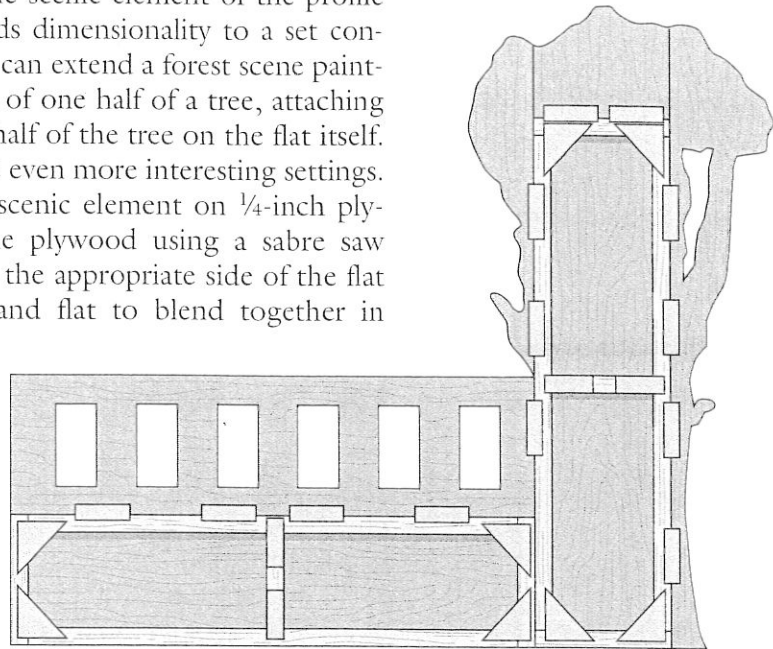
Another method for constructing rocks—and other sculptural objects—is to make use of a series of plywood plates as a frame. Think of the object in sectional views; that is, slice it through in a number of places as you would a loaf of bread. For each of these sections, cut a plywood plate that roughly matches the outline of the object at that point. This series of plywood plates then becomes the frame for a three-dimensional object. Use 1 x 2 stock lumber to join this framework together. Notching the plywood plates to the depth of your 1 x 2 stock pieces will give you a smooth surface to cover with chicken wire. The shape is given dimension and covered using the standard technique for covering three-dimensional scenery (p. 465).

## Profiles

Although a flat has three dimensions (height, width, and depth), it's not considered three-dimensional because its depth is so narrow that it seems two-dimensional, or flat (hence, the name). A **profile** is a scenic element cut from a large sheet of plywood and attached to a flat using keystone (p. 210). The function of a flat can be extended through the use of these profiles. The scenic element of the profile continues onto the flat itself and adds dimensionality to a set constructed from flats. For example, you can extend a forest scene painted on a flat by cutting out the shape of one half of a tree, attaching it to the flat, and painting the other half of the tree on the flat itself. By combining profiles, you can create even more interesting settings.

To construct profiles, draw the scenic element on  $\frac{1}{4}$ -inch plywood and cut the shape out of the plywood using a sabre saw (p. 78). Then attach the plywood to the appropriate side of the flat using keystone. Paint the profile and flat to blend together in one scene.

Profiles can also be free-standing, that is, not attached to flats. As with other kinds of two-dimensional scenery, you will need to brace the scenery to the stage (p. 220).



Rear view of tree profile (above) and front view of the same profile (below)

