



10

Stage Settings

Stage settings establish a play's atmosphere. In Andrew Lloyd Webber's *Sunset Boulevard*, shown here, the characters are dwarfed by the imposing paneled room that includes a sweeping staircase.



The theater, for all its artifices, depicts life in a sense more truly than history.

—GEORGE SANTAYANA, POET AND PHILOSOPHER

SETTING THE SCENE

Focus Questions

What are the purposes of scenery in a play?

What are the effects of scenery in a play?

How has scenic design developed from the Renaissance through modern times?

What are some types of sets?

What are some of the basic principles and considerations of set design?

How do you construct and erect a set?

How do you paint and build scenery?

How do you shift and set scenery?

What are some tips for backstage safety?

Vocabulary

box set	curtain set	value
unit set	unity	tints
permanent set	emphasis	shades
screens	proportion	intensity
profile set	balance	saturation
prisms or <i>periaktoi</i>	hue	

A thorough study of the theater must include developing appreciation of stage settings and knowledge of how they are designed and constructed. Through the years, audiences have come to expect scenery that not only presents a specific locale effectively but also adds an essential dimension to the production in terms of detail, mood, and atmosphere. Scenery and lighting definitely have become an integral part of contemporary play writing and production.

All drama students should have a basic knowledge of stagecraft and design. You will find there are many things backstage to be done by those with enthusiasm and a willingness to learn. Backstage theater experience can bring you the satisfaction of knowing that you have played a part in making a successful show possible and can help you discover talents and acquire skills that will be useful beyond your theater experiences.

NOTE: Many traditional theater terms are used in this chapter. If you are uncertain about the meaning of a term, check the Glossary at the back of this book.

FROM THE PROS

“For me, that’s where the passion is, in the discovery of a life, in bringing a person back to life—what they did, their period, the whole atmosphere of their world.”

—CHARLES
MCLENNAHAN,
SET DESIGNER

Purposes of Scenery

Sets, also called scenery, serve numerous purposes, some basic and others quite complicated and even psychological. The most important purpose of scenery is to provide a place to act. The set should define the time and the setting of the play.

Time	Historical period Season of year Time of day Changes in time during the play
Setting	Climate and geographical conditions Socioeconomic situation Cultural background Political-governmental system of area Interior or exterior Rural or urban Real or imaginary

A set should also help inform the audience about the effects of the environment on the characters, and how, in turn, the characters’ personality traits affect their surroundings. For example, in *You Can’t Take It with You*, the strange conglomeration of mismatched objects found in the living room indicates the let-one-do-as-one-pleases attitude of the Sycamore family.



Another important function of a set is to reveal the interrelationships between people as well as their ranks, stations, influence, or positions in their families, offices, or communities. Scenery can provide a means of focusing audience attention on the actor. Elevating an actor on a stairway or a platform provides a strong stage position. Furniture and actors can be arranged to facilitate triangular blocking with the key actor at the center upstage point of the triangle. Well-placed doorways can dramatically frame the actor.

Some plays call for the simplest scenery possible. *Our Town* has been a popular play for high school productions not just because of the power of its drama but because it does not require any scenery. In *Our Town*, Thornton Wilder uses the most effective designer: the audience's imagination. This play has inaccurately been called "the play without scenery"; there *is* scenery, however—the scenery that Wilder felt was necessary for the universality he sought. Many directors and their casts have failed to recognize that such a stage design demands an even stronger interpretation of the roles by the actors than do productions with conventional scenery.

Scenery should also indicate the style of the production. For example, sets for plays done in the romantic style are very different from sets for plays in the epic style. (See Chapter 6 for a discussion of styles of drama.) Of course, stage settings are not totally realistic, especially when presented on a proscenium stage. Theater **conventions**—practices generally accepted

Minimal scenery focuses attention on the characters. In this production of *M. Butterfly* by David Henry Hwang, John Lithgow's character controls center stage even though he is seated.

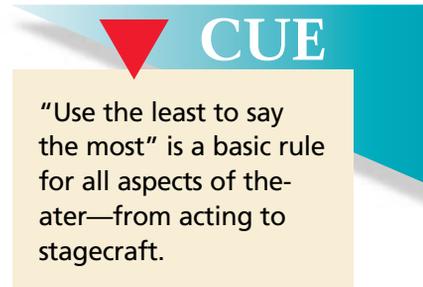
Compare the sketch of a set for *Porgy and Bess* with the photograph of the actual set. The scenic designer's sketch of a crowded, old-fashioned neighborhood comes to life after the set is constructed.



in lieu of realistic depiction—determine general positions for set pieces and entrance areas. Following are a few of the staging conventions used in the theater:

- Almost all furniture faces the audience.
- Exterior doors are usually offstage right.
- Interior doors are usually stage left or upstage.
- Fireplaces tend to be placed on stage-right walls.
- French doors are usually stage left.
- Living-room and dining-room furniture often appear in the same area.

Another important function of scenery is to create mood and atmosphere. The reaction of the audience to the actors and the script may be determined to a great extent by the mental framework a set creates. For example, if the set is painted in bright yellows, oranges, and pinks, the audience will expect the play to be correspondingly light and cheery. On the other hand, if a set is painted in violets, dark blues and greens, grays, and black, the audience will expect the play to be heavy and serious. The scenic designer utilizes the known psychological effects of color and design to arouse a subconscious emotional reaction from the audience. Sets should be aesthetically satisfying, however, even when an atmosphere of fear, chaos, or mystery is intended.



CUE

“Use the least to say the most” is a basic rule for all aspects of theater—from acting to stagecraft.

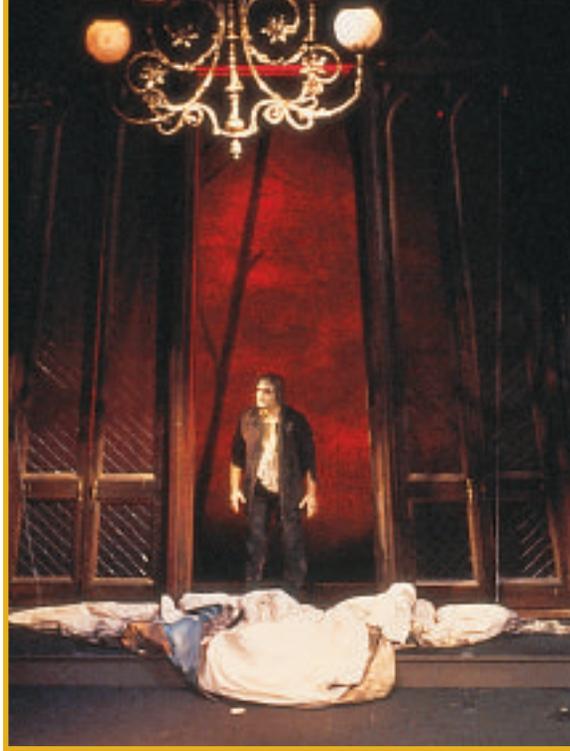
Scenic Design

Set designers must always remember that a scenic design can be only as elaborate or difficult as the crew and budget can handle. Effective design adds to a production color and life that can make theater an exciting experience. Even costumes seem more appropriate and attractive against an appropriate background. In addition, a careful selection of stage furnishings can make the set and its people seem complete and correct.

SCENIC DESIGN AND THE DRAMA STUDENT

The basic high school drama course is concerned more with the principles of scenic design and construction than with the actual building of sets. However, some knowledge of scenic design is valuable whether or not you plan to take a course in stagecraft. Every performer needs to know the role of the director, the scenic designer, the technical director, the stage manager, and the stage crew in order to appreciate the contribution each makes and to achieve the spirit of cooperation essential to successful productions.

The lighting and scenery combine to give the setting of *Frankenstein* a gloomy, ominous atmosphere.



In bringing a play to life, the scenic designer is next to the director in importance. The aim of both is to create an atmosphere that expresses the meaning of the play. Scenic designers do not build real rooms, houses, or mountaintops; instead, they use painted canvas, creative lighting, and special effects to stir the imagination of the audience so that the playwright's dream seems a reality. The scenic designer

works with scenery, lighting, makeup, and costumes to create illusions. The more convincing the illusions, the better the production.

Effective scenery and design should . . .

- match the author's intent and the director's interpretation
- always serve the actor, never dominate him or her
- complement the costumes, never clash with them
- never become an obstacle course for blocking
- work toward consistency, avoiding distractions
- aid the action of the play, not hinder it
- fit the needs of the play
- be simple in design, construction, and shifting

Application ACTIVITY

Select a scene from a familiar play or from *A Treasury of Scenes and Monologues*. Write a short description of the amount and type of scenery you would use to fulfill the basic purposes of scenery discussed on pages 398–401.

DEVELOPMENT OF SCENIC DESIGN

From the Renaissance to contemporary times, devoted theater technicians and designers have striven to improve scenery and light design in an effort to more intensely convey meanings through visual sensations.

Renaissance Stage design as we know it came into being in Italy in the mid-fifteenth century. The oldest structure still remaining is the solidly built and heavily decorated Teatro Olimpico, still perfectly preserved in Vicenza. It was modeled after the ancient Roman theaters and opened on March 3, 1585. Behind the entrances appeared painted stucco walls showing city streets in perspective. Lining those streets are buildings covered with statues of diminishing size. This technique produced the amazing effect of a city stretching into the distance.

The large central entrance of the Teatro Olimpico was the forerunner of the proscenium arch. The first real proscenium was an elaborate structure surrounding a frame with a curtain. Behind this frame, actors performed against painted scenes. To facilitate scenery changes, *periaktoi*, prism sets modeled after the revolving prisms of the Greek theater, were sometimes used.



The proscenium arch evolved from the arched entrance of the Teatro Olimpico in Italy. The columns and statues shown in this model resemble those in ancient Roman theaters.

The raked stage, another Renaissance invention, became popular in England and was still used in London early in the twentieth century. In an attempt to create perspective, the stage floor was slanted upward toward the back of the stage. The terms *upstage* and *downstage* came into being; actors actually walked up or down the stage.

Both the beautifully elaborate scenery used in performances of dramatic allegories and the simple house facades of the Elizabethan playhouse were representative of the Renaissance. Dramatists experimented with backdrops, wing settings, revolving stages, and **shutters**—movable flats on tracks used for quick scene changes.

Restoration In England during the Restoration period, most of the acting took place on raked aprons, with little action in the scenery behind the proscenium. At this time, the proscenium was a very thick wall with one or two doors in each side wall to enable the actors to enter on the apron rather than in back of the frame.

Nineteenth Century In the nineteenth century, more efforts were made to suit the scenery to the individual play. Certain scenes, however, remained typical:

- interior sets—canvas drops and wings painted to represent a room
- exterior scenes—painted trees, fountains, gates, and pathways
- entrances—wings parallel to the back wall
- street scenes—painted buildings, store windows, signs, and street lamps

By the middle of the nineteenth century, designers were seeking greater accuracy in historical and realistic representation. The beginnings of realism took root with these notable changes:

- the gradual shrinking of the apron
- the addition of orchestra seats
- the elimination of painted backdrops
- the closing of the wings, which gave the illusion of left and right walls onstage

Twentieth Century The cry for realism was answered in the twentieth century by André Antoine in France and David Belasco in the United States. Their stage sets were so photographically accurate that their style of design was called **naturalism**. Belasco was so concerned with exact detail that his scenery sometimes distracted the audiences from the action of the play. The naturalists were important because their ultrarealistic sets worked toward making the drama more realistic.

Most realistic stage sets today are designed with selective realism. This modified form of realism, developed because the many details of naturalism confused the audience, stems from a belief that an impression of



actuality is better theatrically and artistically. The designer selects scenic elements that convey the idea of the locale rather than attempting to create an exact replica of it.

The modern realistic interior set in a proscenium theater has all essential entrances, doorways, windows, and so on placed in a two-sided or three-sided room. The room is usually placed off-center and at an angle instead of squarely on the stage in the old-fashioned manner. The proscenium stage has been called “fourth wall theater.” The fourth wall is imaginary, of course, and its presence is only suggested. Furniture usually faces that fourth invisible wall, through which the audience observes the action. There have been attempts to treat the fourth wall as an actual wall by placing a sofa with its back to the audience or by having an actor look out an imaginary window while facing the fourth wall. Lighting has helped establish this illusion of reality.

Twentieth-century exterior sets are quite often only suggestive. **Plastics**—three-dimensional structures—and **cut-outs**—two-dimensional profiles—are placed against a drop or sky cyc. A **ground row**, a type of low cut-out, is used to break the line between the floor and the drop and to give the illusion of distance.

The twentieth century has seen many experiments in scenic design. Two important designers were Adolphe Appia and Gordon Craig. Both experimented in symbolic scenic design. Adolphe Appia concentrated on three-dimensional forms, which he contended were essential for the performance of the three-dimensional actor. He emphasized the importance of the actor and used dramatic lighting innovations to focus attention on

This realistic set for “MASTER HAROLD” . . . and the boys by Athol Fugard shows the St. George’s Park Tea Room in Port Elizabeth, South Africa. Actor Danny Glover, gesturing broadly, dominates the simple setting.

the performer. Gordon Craig, on the other hand, believed the essential message of a play could be conveyed most effectively by the scenic designer. He even suggested eliminating the actors and replacing them with super-marionettes.

TRADITIONAL SETS

Stage sets are as varied as plays and the characters that appear in them. Selectivity, simplicity, and consistency are important to a stage designer. Sets should be planned so that they may be built firmly, handled easily, and packed efficiently. Most of all, actors should be able to move about easily and safely and should feel that the set provides an appropriate atmosphere for the characters they are portraying.

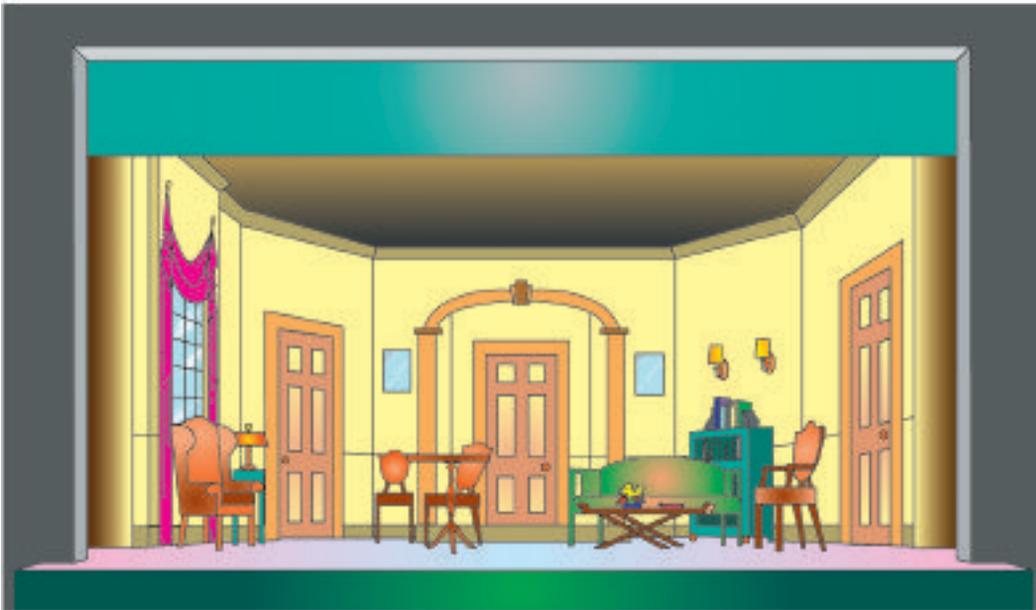
The most common type of interior set has been the **box set**, which replaced the old wings and drops of the nineteenth century, but it, too, has been replaced by other forms in recent years. The box set consists of two or three walls built of flats and often covered by a ceiling.

Another common type of set, the **unit set**, is made up of several scenic units that can be moved about the stage, turned, and interchanged to create several settings. A unit might be a building placed down left with a ground-level wooden door and a second-level balcony window. The appearance of the unit can be completely altered by moving it up right, changing its angle, and removing the wooden door and the balcony rail. Unit sets are quite practical for schools that wish to present multiset plays, to present a program of one-act plays, or to build units that can be arranged to fit the needs of almost any play in a small theater.

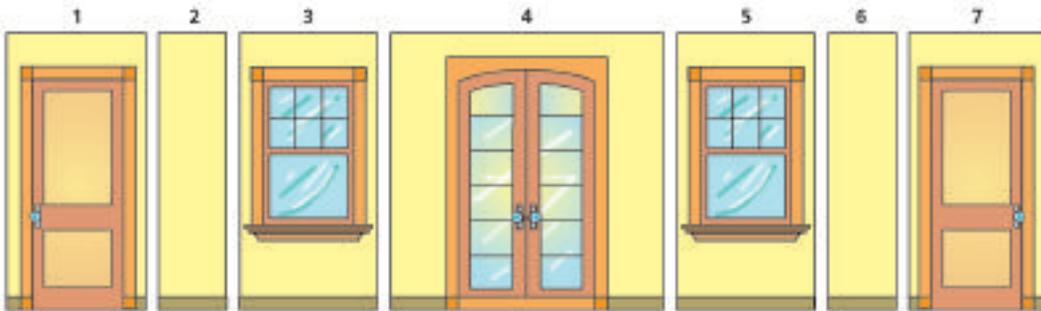
This setting from *Philadelphia Story* uses a box set with three sides and a ceiling to give the impression of a room. Box sets give a set depth and naturalness.



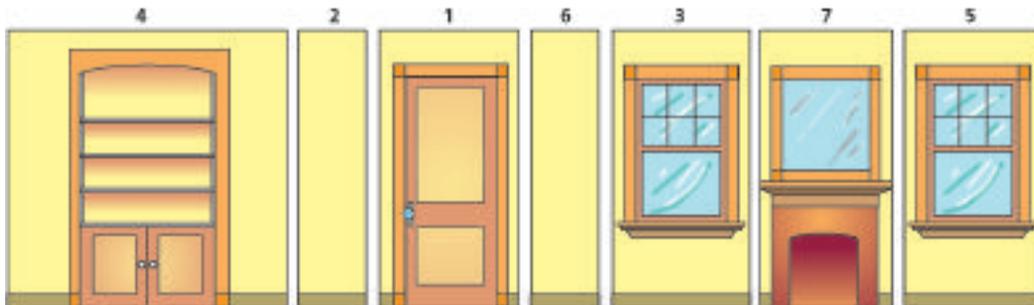
Perspective of a Box Set



Elevation of a Set Built with Flats

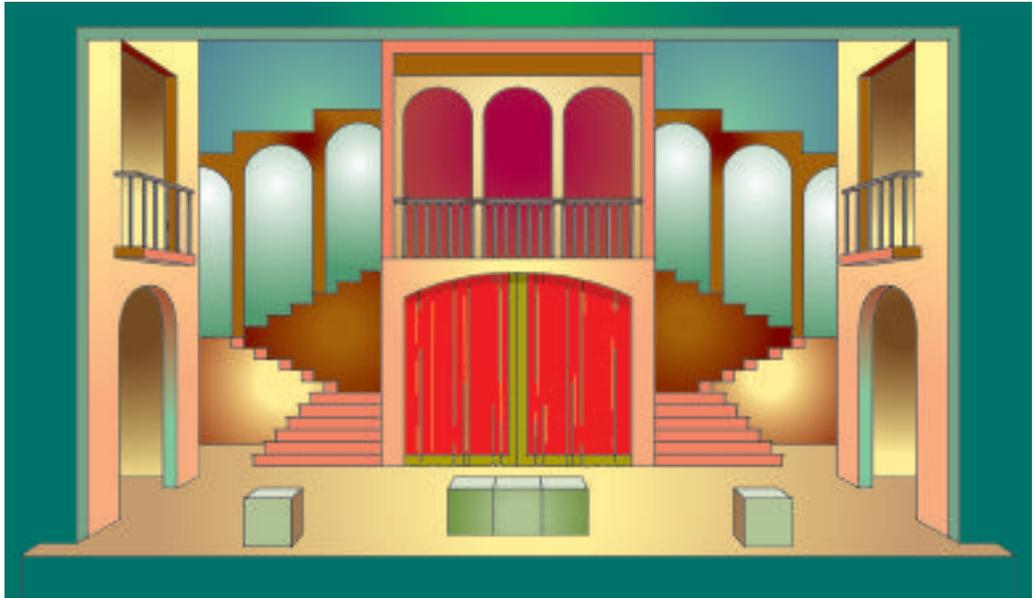


UNIT PLAN "A" WITH FRENCH DOOR



UNIT PLAN "B" WITH BOOKCASE AND FIREPLACE

Permanent Set



The **permanent set**, yet another type of staging, rarely changes during the play. There are basically three kinds of permanent sets. Most high schools use a single permanent set for straight plays. A simple doorway can be either an interior or an exterior entrance, a gate, or a passageway. The platform is equally versatile. Controlled lights help determine the locale. A second important type of permanent set consists of many openings, some of which are large. Doors, windows, arches, curtains, and backing units are placed within or behind the openings to simulate scene changes. The third type is a modification of the permanent set, called the multiple set, which has several distinct acting areas separated with dividers, such as platforms or railings. Flexible, controlled lighting is necessary.

Further opportunities for scenic variations are provided by using screens and profile sets. **Screens** consist of two-fold and three-fold flats, which are used either to form walls against a drapery background or to cover openings or furnishings as a quick means of changing scenes. Screens can be almost any height and width and are usually freestanding.

Profile sets, sometimes called cut-down or minimum sets, can be constructed of screens, but the chief difference between profile sets and screens is that the profile set, like the box set, forms the entire perimeter of the setting. Colors and patterns from gobos that suggest changing moods and emotions may be aimed against the background cyclorama to bring about a strong identification with the action.

Screen Set



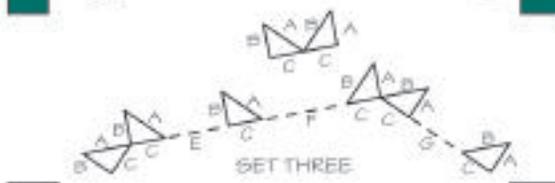
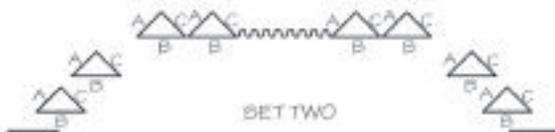
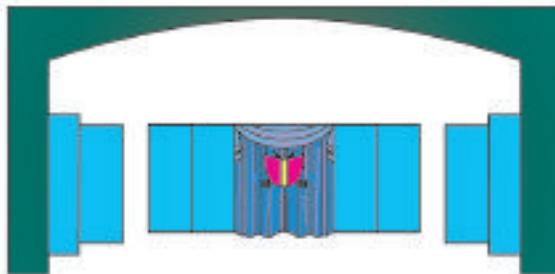
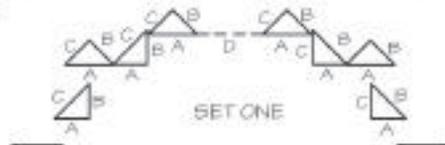
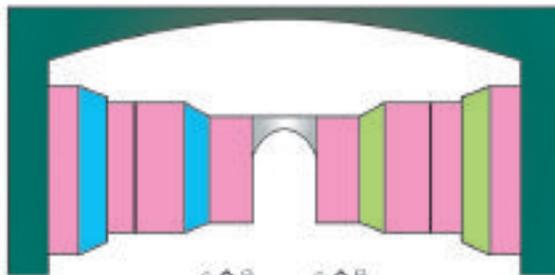
When fast changes with a minimum of equipment and space are needed, **prisms**, also called *periaktoi*, can be used. These are usually equilateral or isosceles triangles mounted to a wheeled carriage, which can be pivoted. Each *periaktos* is made up of either three six-foot flats or two four-foot flats and one six-foot flat. At least four *periaktoi* are needed, but for more variety in combination and position and for more set possibilities, six or eight can be used. Doorways can be created in the following ways:

- Use a space between two *periaktoi*. This is the simplest method.
- Hook a normal floor flat between two *periaktoi*.
- Hang inserts, or plugs, between two *periaktoi*. The shape of the plugs can either resemble ordinary doors or match a stylistic design.

Window, bookcase, and fireplace flats can also be used as one side of a *periaktos*. The *periaktoi* are especially valuable for schools that lack fly space, have trouble masking the sides of the stage, or need quick changes with limited equipment.

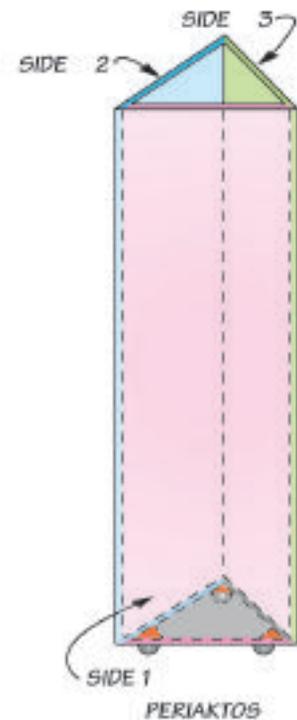
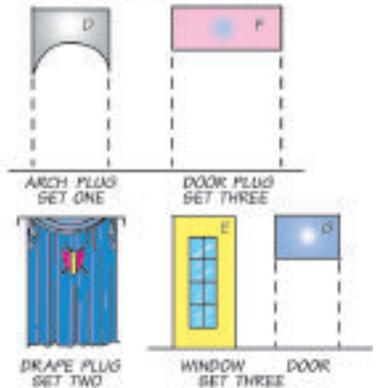
Set designers have frequently used curtain sets as substitutes for constructed scenery. A **curtain set** simply uses curtains as a backdrop for a play. The typical school cyclorama rarely provides an

Periaktoi Set—Rotating Eight Periaktoi to Create Three Different Sets

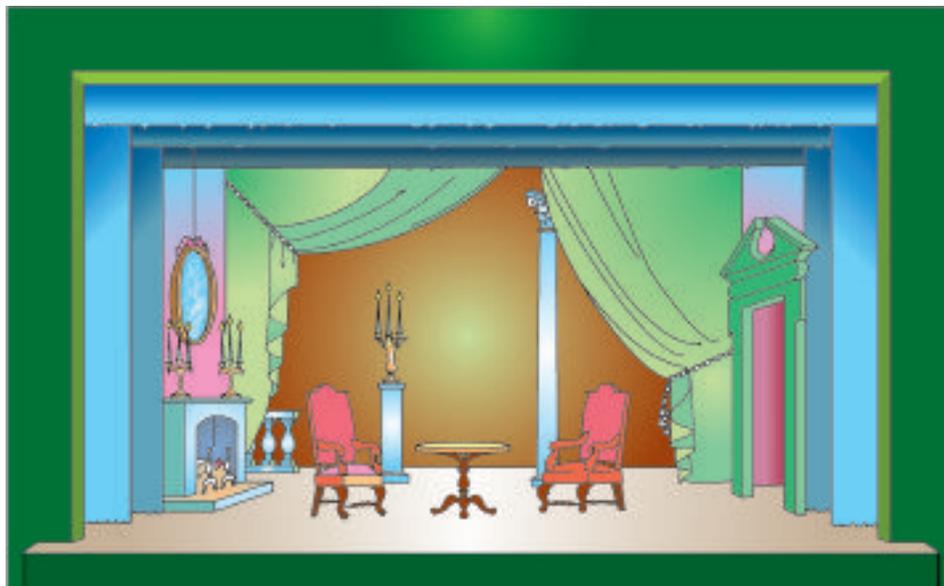


PERIAKTOI

- A = SIDE 1
- B = SIDE 2
- C = SIDE 3



Curtain Set



adequate background for a play, but sometimes limitations of space, equipment, and budget force the director to use a modified curtain set. There are, however, many effective ways to use curtains. A formalistic set with ramps, platforms, columns, and so on might look best against a curtain set. The placing of a few flats, such as doorways, windows, and fireplaces, between curtains can often turn a plain curtain set into an acceptable theatrical set. Stage drapes can be gathered or pulled back much like huge window curtains. Nevertheless, curtains can never be transposed into convincing realistic sets. One of the disadvantages of a curtain set is that the acting area is always the same size and shape. Therefore, many designers who have had to use curtain backgrounds have used freestanding set pieces and furniture to “shape” their sets within the frame of the cyclorama.

The use of a black cyclorama can be quite impressive. Controlled lighting can be used to make the actors and furnishings stand out sharply against the black space. White furniture and white makeup are also especially striking against a black background.

Another kind of set that is very effective is the **skeleton set**. This kind of set consists simply of frames and openings that can be left empty or filled by draperies, backings, and doors.

OPEN-SPACE TECHNIQUES

Scenic artists have had to develop new techniques of set design for the **thrust stage**, a low platform stage that projects into the audience. Since the audience surrounds the thrust stage on three sides, conventional scenery

should be placed deep on the stage to avoid blocking the audience's view. Designers have used cut-down sets and screens quite successfully, but one of the most effective innovations is the **floating-screen**, or **multiple-plane set**. This technique employs single flats or narrow drops that are placed or hung at various depths parallel to the front of the stage to provide concealed entrances for actors and suggest a locale.

Arena stages (theater-in-the-round) use a different approach. Since the audience completely surrounds the stage, scenery will undoubtedly block the view of at least some of the spectators. Objects normally placed on walls, such as pictures, are often casually laid on tables or suspended from thin wires. For example, a mirror may be simply an open frame suspended from above. A window may be represented by only a partial frame. The furniture must allow the actors to move constantly in *S* and circular patterns.

Procedures in Scenic Design

The basic goal of scenic design is to create a functional background for the action without intruding on that action. A set may have aesthetic appeal, establish tone and atmosphere, convey symbolism, and even aid in the expression of the theme. If it does not provide the actors with a workable environment, however, it has failed in its primary function.

Although the designer has overall responsibility for the scenic design, both the designer and the director must work together during different phases of the planning. The sequence of a designer's tasks during the early planning is important.

*F*ROM THE PROS

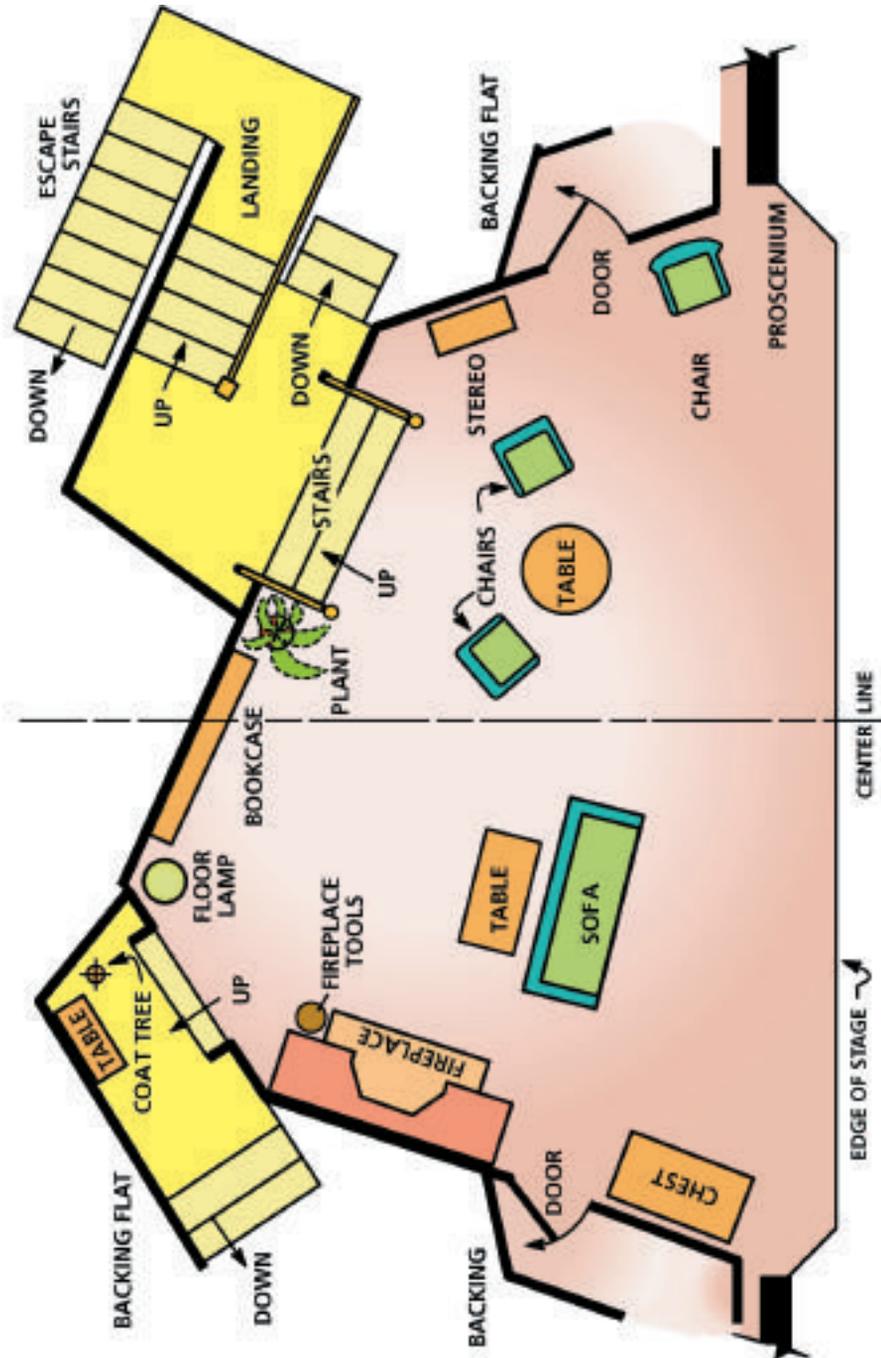
"I don't think you can read a play abstractly without a sense of where it's going to be done."

—DAVID JENKINS, SET DESIGNER FOR *THE ELEPHANT MAN* AND *OTHER PEOPLE'S MONEY*

Designer's Preliminary Tasks

1. Read the play several times.
2. Discuss the play and production style with the director, who provides the foundation for design, including the basic floor plan.
3. Make a sketch, called a **rendering**, that scenically expresses the meaning and spirit of the play.
4. Consider available equipment, funds, and materials.
5. Enlarge the sketch into a perspective drawing.
6. Work out a detailed floor plan showing positions and sizes of entrances, windows, and all props.
7. Build a three-dimensional model of the set design.
8. Draft elevations and working drawings (detailed construction illustrations or blueprints).

FLOOR PLAN—BOX SET



PREDESIGN CONSIDERATIONS

Numerous factors must be considered before a production can be designed. Although the budget of the production is important, the stage, the equipment, and the number and kinds of sets to be used also affect the design. When several sets are required, the designer must always plan for the weight and mobility of scenic units and for the available fly space, among countless other factors. Before designing a set, the scenic designer should answer certain important questions.

PREDESIGN CHECKLIST

Size and shape of auditorium

Is the floor raked? What type of seating arrangement is being used? (This is important in gymnasium-auditorium combinations and in small theaters.)

Space

How much storage space is available? What are the dimensions of the apron and wings? What equipment is available? How deep is the fly space? Are flies high enough to handle a drop without tripping? Is the system manual, electrically winched, or counter-weighted?

Flats, drops, and scrim

How many flats, drops, and scrim are there? What are the heights and the widths of flats?

Special units

How many constructed platforms, ramps, and staircases are there?

Lighting

What kind of lighting equipment is available? How flexible is this equipment?

CUE

Time and sound are two important factors to consider when scenery is shifted. During a scenery change, a long wait and an excessive amount of noise coming from the stage can be disconcerting for an audience.

A scenic designer should also be aware of two other basic considerations when planning a scenic design: the play and the audience.

The Play The first consideration of scenic design is the play itself—its theme, type, and style. The designer must be aware of important scenes and of special effects essential to the play, including lighting needs. The functional aspects of the set—the location of doors, windows, fireplaces, elevated areas, essential props, and so on—provide the information necessary for a preliminary design. Since a set is the background for actors, their experience, ages, sizes, costumes, and makeup must be considered. A scenic designer must plan a set with and without people



Even from this distance and angle, the simple set for *Les Liaisons Dangereuses* is fully visible to the audience.

to produce one that looks appropriate with both the maximum and the minimum number of performers who will occupy it.

The Audience Naturally, the designer must also consider the audience. Because the spectators must see all important action, the designer must take sight lines from the front corner seats and the highest balcony seats. This means that the side walls must be raked (set at an angle) so that every person in the audience can see each entrance. Likewise, the designer must position elevated upstage platforms so that the upper balcony audience will not see “headless” actors. Second-story levels are often slightly raked toward the audience. The designer might have to “cheat down” the height of a second story and even lower the heights of doors and banister rails to accommodate the highest seats.

Application ACTIVITY

Make a survey of your theater or auditorium using the Predesign Checklist on the opposite page. Add any additional information that might be helpful if you were planning a production. Be prepared to discuss the information you gather.

ARTISTIC CONSIDERATIONS

Because stage design is a specialized art, a scenic designer should keep in mind several artistic principles. One of the most important principles is **unity**. This principle demands that all elements of the set form a whole that centers around the theme of the play. All furniture and properties must coordinate with the background and, if possible, should be a part of the stage design in period and composition.

Another important principle is **emphasis**, or focusing the audience's attention on a particular object, area of the stage, or piece of furniture. Everything else on the stage should be subordinate to this center of interest. A good set design can emphasize a point of interest in several ways.

- Place it in a prominent position.
- Paint it a color that makes it stand out from the rest of the set.
- Make it the focus of all lines of interest.
- Play light upon it.

Proportion and balance are also important artistic principles. **Proportion** uses the human being as the unit of measurement. In realistic plays, all scenic elements are scaled to a person six feet tall. Nonrealistic sets may make people appear dwarfed or engulfed by rocks or towering buildings.



This stage picture from *Hello, Dolly!* is balanced; the performers are evenly distributed over the stage with the "Yonkers" sign as a central axis.

Balance requires an equal distribution of emphasis from one side of the stage to the other. This may be achieved through line, mass, and shape. For example, an archway might be balanced by a large upright chest, or a staircase might be balanced by a dominant portrait. Except in stylized settings, asymmetrical or informal balance is preferable to perfect symmetry.

The **central axis** is the focal point in the design, usually the deepest point just off-center. The halves of the stage on either side of this axis should be balanced but not exactly alike. The director and the scenic designer must work closely together because the position, number, and importance of people onstage influence the balance of the scenic pattern. For example, a strong character who is to exemplify spiritual leadership and is the center of interest in a scene might be placed on a higher level against tall columns, a high arched doorway, or long drapes, with the other characters, perhaps a large crowd, below. The emphasis of the strong character's influence in the minds of the audience will offset the size of the crowd, and the stage picture will balance.

Equally important is the artistic principle of **line**. The lines in draperies, columns, or costumes alter the sense of proportion and may even have a psychological effect on the observer. For example, consider the potential psychological connotations of the following:

Long vertical lines	dignity, elevation, hope, or spirituality
Horizontal lines	emotional stability, calmness, or tranquility
Diagonal lines	driving force, strife, uncertainty, or concentration
Curved Lines	ease, comfort, wealth, or expanse
Curves and angles	intense excitement (if combined with contrasting colors)
Crooked/jagged lines	chaos, shattered dreams, injustice, or pain

The final two artistic values of importance to scenic designers are mass and shape. **Mass** takes into consideration the concepts of bulk and weight, both of which are difficult to determine unless tested under the lights. Dark-colored objects usually appear heavier than light-colored objects. **Shape** often influences both the concept of mass and the psychological reaction to objects on the stage. Remember that shape is outline, while mass is three-dimensional. Shapes may be geometric or free-form, natural or stylized, realistic or impressionistic. A circle may seem infinite or eternal; a square or cube may appear staid or unimaginative; a triangle may seem uplifting or securely founded; a diamond may seem calming and restful. Both mass and shape influence the balance of a set.



The rising diagonal lines of stretched fabric in this scene from Čapek's *R.U.R. (Rossum's Universal Robots)* give it a sense of otherworldly strangeness appropriate for a futuristic drama. The bareness of the set, combined with white scenery and costumes, makes everything seem clean and simple.

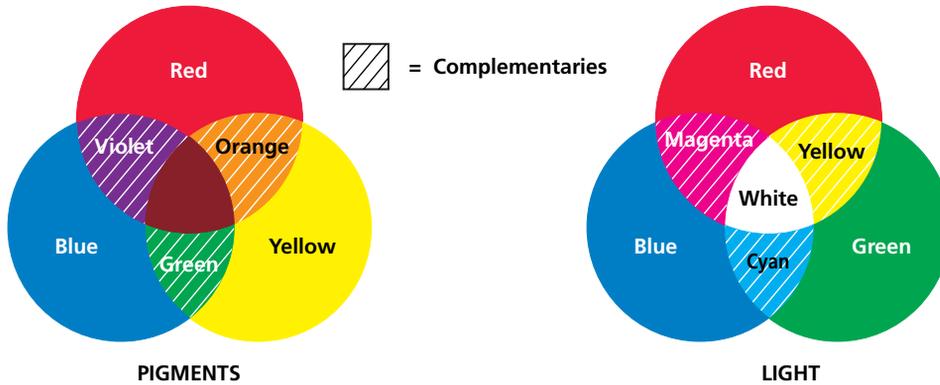
USE OF COLOR

Color is one of the most important elements of staging because various colors and their combinations produce very different emotional effects. The relationship between characters or scenes and the colors used might be important factors in a play's success. Onstage, color effects are achieved by playing colored lights on the pigments used in sets, costumes, stage furnishings, and even makeup. Because colored light makes very definite and often surprising changes in the appearance of pigment, it is necessary to experiment with both light and pigment to get the desired result. Although this may be a long and involved process, it is fascinating to see what happens to fabrics and painted surfaces under different lighting.

The primary pigment colors are red, yellow, and blue. The secondary colors are orange, green, and violet. The primary colors of light are red, green, and blue, and the secondary colors are yellow, cyan (a light blue-green), and magenta.

CUE

Colors almost always arouse emotional responses; these responses can help establish the mood and atmosphere for each scene and for the whole play.



Sets and costumes are sometimes color coded for both identification and emotional response. **Color coding** means identifying the emotional tone of a scene by its color dominance; for example, a “pink scene” may be one of romantic fantasy; a “red scene” may be one of anger or passion. Characters, too, may be color-coded in stylized productions.

Colors differ from each other in hue, value, and intensity. **Hue** indicates the purity of color—the redness, the blueness, and so on. The various colors seen in the spectrum of a beam of light passing through a prism are called hues. As light falls on different surfaces, the colors are absorbed or reflected. A surface that absorbs all the hues except green appears to be green because it reflects only that color.

If the emphasis of a costume or prop is important, the value of the color is a consideration. The **value** of a color is its lightness or darkness and is determined by the amount of black or white mixed with it. Each color is said to have a value scale, running from white at one end to black at the other. Consider the differences between light or pastel colors, **tints**, and dark or deep colors, **shades**.

CUE

Black is the absence of light and therefore is the absence of color. White is the fusion of all the spectral colors.

Tints	Shades
contain more white suggest youth, comedy, informality	contain more black suggest dignity, seriousness, repose

Color can also differ in its intensity. **Intensity**, often referred to as **saturation**, is the brightness or dullness of a color. To add intensity to a color, illuminate it with a light of the same color. To lessen the intensity of a color, add gray to the pigment or place the color by its complementary color. The complementary color for any one of the three primary colors (red, blue, yellow) can be achieved by mixing together the two other primaries. For example, if you wish to get the complementary color of red, mix together the other two primary colors, blue and yellow, and you get green. (Refer to the illustration on the previous page.)

CUE

A point to remember: green-blue and blue-green are not the same color. The color named second is the dominant hue. Therefore, green-blue is blue with a tinge of green in it, and blue-green is green with a tinge of blue.

A color wheel is an invaluable aid in designing because it shows the relationships of the various hues. The colors next to each other on the wheel are analogous, or contain the same hue. For example, yellow, yellow-orange, and orange are analogous, since they all contain yellow. When analogous colors are used, a dash of complementary color provides balance.

Since neither pigments nor materials for coloring lights are likely to have pure color, endless experiments are required to get a desired effect. You can experiment with the effect of light on the pigments on actual sets as they are built. Run through the color cycle of night to day—black, pale gray, light yellow, light red, deep red, orange, and full daylight. Then reverse this cycle to run from daylight through the sunset hues to darkness, ending with the green-blue conventionally used to simulate moonlight on the stage.

In *Roseleaf Tea*, the stage lighting creates beams of weak sunlight that make natural shadows.





Notice how the effective use of color leads the eye to the points of balance in this scene from *Blood Wedding*.

In any stage set there should be a controlling color scheme that carries out the predominant mood and atmosphere of the production. The most effective color schemes are those that give a single, unifying impression. Remembering that colors are referred to as warm or cool might be helpful when striving for a single impression to give continuity to a play. Red, orange, and yellow are warm colors. You see them in sunlight and fire. Blue, green, and violet are cool colors. You see them in deep pools and in shadows under leafy trees. Warm hues seem to advance, or move forward in space, because they attract attention quickly. Cool colors appear to recede, or move back in space, because they are less noticeable. However, a stage background or set piece painted in warm colors looks smaller because it seems nearer, while one painted in cool colors looks larger. A warm-colored costume or object generally catches the eye at once and looks important. Objects or persons dressed in cool colors are generally less noticeable to the audience. The warm colors are stimulating and exciting, appropriate for highly emotional scenes and for comedies. Cool colors give a sense of tranquility and are usually the predominant colors in serious comedies and in tragedies. One should bear in mind that too much stress on warm colors can be very irritating and too many cool colors depressing.

Certain stage traditions are based on known reactions to color. Following these traditions is an important means of getting satisfactory empathetic responses from the audience. Colors are used in stage design to communicate the following qualities:

blue	calm, cold, formal, spiritual, pure, truthful, depressing
orange	exhilarating, cheerful, lively
red	aggressive, passionate, bloody, angry, strong
yellow	cheerful, happy, youthful, cowardly
pink	fanciful, romantic
green	youthful, eternal, reborn, jealous
soft green	restful, soothing, tranquil
purple	mournful, mystic, regal
gray	neutral, depressing, negative, somber
brown	earthy, common, poverty-stricken
black	melancholic, tragic, gloomy, deathlike
white	truthful, pure, chaste, innocent, peaceful

CUE

To emphasize a costume or prop, place it against a background of a different value or hue. To make the costume or prop inconspicuous, show it against a background of its own value or hue.

Numerous other design aspects contribute to a balanced production. If a design is to be interesting, it must have variety through contrast and subordination. Too often high school stage settings give every scenic element equal strength and dominance. This is not to say that a single motif carried through an entire scene of a production will not effectively underscore the unity and harmony of design. The key to good design is simplicity. Cluttered sets, overly designed walls, or too many colors should be avoided in artistic stage sets.

Application ACTIVITY

Decide on a color scheme for a scene from a play that you have seen or read. Remember to consider the personalities and roles of the characters in that scene.

Constructing the Set

Selectivity, simplicity, and consistency should be remembered when planning, designing, and constructing the set for a production. Sets should be planned so that they can be built firmly, set up steadily, struck rapidly, carried easily, and packed away efficiently. Above all, they must blend with the actors and with the theme of the play. The most common sets involve draperies, flats, or drops, most of which must be bought or rented; or designed, assembled, and painted.

CONSTRUCTING THE FLAT

The basic unit of construction for box sets, screens, *periaktoi*, and cut-down scenery is the flat; therefore, learning as much as possible about flats is to your advantage as a scenic designer or stage crew member. Also, since most plays require an interior set, you should learn the procedures for flat building, assembling, and painting.

The most satisfactory height for flats for the high school stage is twelve feet, although ten- and fourteen-foot flats are not uncommon. Large university and professional stages with high prosceniums may accommodate flats up to twenty-four feet high. On the following page is a list of the basic flats needed.

By painting the pieces of a set in neutral colors, you can plan to use the pieces interchangeably to create more than one scene.



Plain Flats		Special Flats		
Width	Number Needed	Type	Width	Number Needed
1 ft.	2–4	Door flat	5–6 ft.	2–3
1 1/2 ft.	2	Window-bookcase flats	5–6 ft.	2
2 ft.	2–4	Fireplace flat	5–6 ft.	1
3 ft.	6–8	Arch flat (booked)	8 ft.	1
4 ft.	6–8	French door, sliding door	8 ft.	1
5 or 6 ft.	<u>6–8</u> 24–32	(booked)		<u> </u> 7–8

This system requires about thirty to forty flats, depending on the size of the stage. One of the advantages of this system is that there are matching flats for alcoves, bay windows, *periaktoi*, and columns. Another advantage is that it is easy to plan wall dimensions and designate flats accordingly. Care must be taken to keep the design from turning out nearly symmetrical, however.

To construct a flat, you will need some basic materials: lumber, fabric, hardware, rope, and glue. Most flats are built of #2 grade 1" × 4" pine. The boards used for stiles and rails should be absolutely straight and free of any loose knots. The corner braces are made from 1" × 2" stock. The corner blocks, keystones, and mending plates are cut from 1/4" plywood. Refer to page 426 for a detailed illustration of a flat.

Another kind of flat is the rigid flat, which can be built from plywood instead of cloth. These flats are strong, require little frame bracing, and last longer than those made of cloth, but they are much heavier than cloth flats.

The special stage hardware needed for a well-made flat includes three lash-line cleats, two tie-off cleats, and a stage brace cleat. Clout nails (1 1/4" soft nails that clinch themselves when a piece of heavy metal is placed under the stile or rail before hammering), threepenny box nails, or screws are used to attach plywood to the frame. Staples and diluted white glue are used to fasten cloth to the finished frame.



**STAGE BRACE CLEAT
W/ BRACE HOOKED**

CUE

The best fabric for covering flats is canvas, but its cost makes it prohibitive for most groups. The next best choice is unbleached muslin.

Framing is the first step in the construction of a flat. The most common joint used is the **butt joint**, a joint formed by fastening pieces together end to end. However, **miter joints**—joints formed by cutting the ends of the pieces at an angle and fitting them together—are better, since they are stronger and do not chip or split as easily. When using butt joints, cut the top and bottom rails to the exact width the finished flat is to be. This allows the flat to slide without splitting the stiles. This also means that the boards used for the stiles must be cut to the desired height of the flat minus the width of the two rails. Check exact lumber sizes with a lumber salesperson and always measure carefully. Common names for lumber sizes do not reflect actual sizes. For example, 1" × 4" lumber is always less than one inch by four inches. Check your measurements again before cutting. A good rule to remember is "Measure twice; cut once."

After cutting the top and bottom rails and the two stiles, assemble the frame. If you do not have a template, you can use an adjustable framework as a mold, or you can nail two boards at a ninety-degree angle to serve as a square. Framing is easier when one person can hold the square while another person does the nailing. Then, keeping the square in place, nail on the corner blocks. A butt joint requires eleven nails; a miter joint needs only ten nails. If you use a butt joint, the grain of the corner block must run across the joint.

Whenever you attach anything to the back of a flat, it must be set back three-fourths of an inch from the edge. A scrap piece of 1" × 4" wood on edge will serve as a guide. This allows two flats to be joined at a right angle without a crack appearing between the flats.

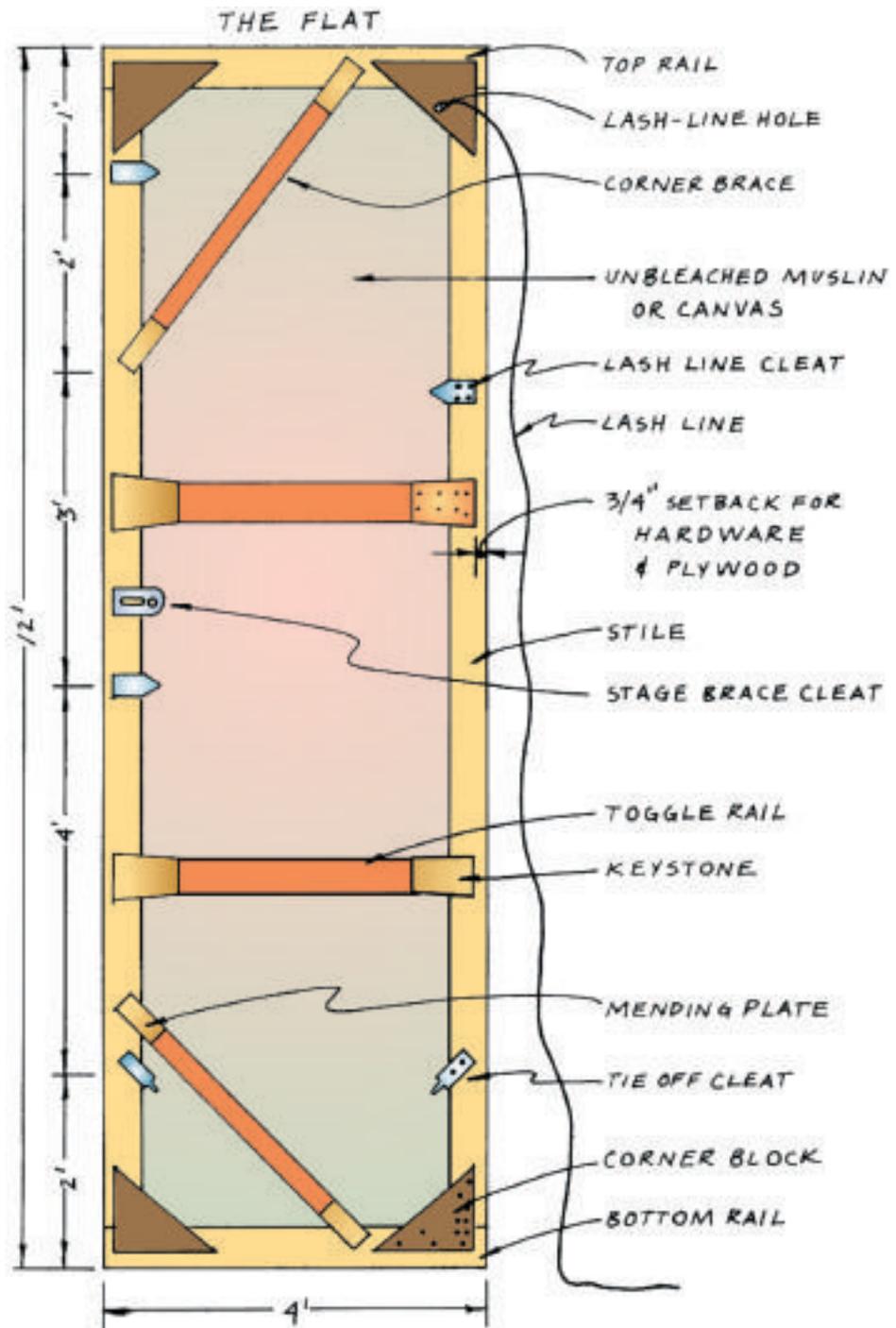
Next, put in one or two **toggle rails**, or bars. Toggle rails should be set at the same height so that keeper hooks may hold a stiffener board when the set is erected. Usually eight- to ten-foot flats require one toggle, while flats twelve feet and taller require two toggles. The toggles should be cut the width of the flat less the width of the two stiles. *Do not measure the toggle by the space between the stiles.* If necessary, force the stiles in or out so the total width is exactly the same as the top and bottom rails. Cover the joint with keystones.

You can now install the corner braces. Notice that both are on the left side of the flat. If they were on opposite corners, the flat would torque (twist) diagonally. Corner braces do not need to be exact but are approximately the length of a rail. A forty- to sixty-degree angle is created if the corner braces are placed properly. Use mending plates to secure the joint, and your flat is fully framed. (Mending plates are 1 1/2" × 5" pieces of 1/4" plywood cut lengthwise with the grain.) At this point your flat is fully formed. Now screw on the hardware.



CUE

The most important tool for scenery building is probably the framing square. Usually made of metal, this tool has at least one ninety-degree angle and at least two straight edges. It is used to check right angles.



Make the frame flameproof by washing it with a solution of two pounds of borax, two pounds of sal ammoniac, and two gallons of water. Then turn the flat face side up and cover it with muslin. The muslin should overlap all sides unless there is a finished edge, which can be placed one-quarter inch from the outer edge of one stile. Place staples every four inches, one-quarter inch from the inner edge of one stile or rail. Many set builders prefer to drive the staples only partway and remove them after the glue dries. Others drive staples all the way and leave them.

Once the cloth is stapled in place on one stile, following these steps may simplify the next task.

1. Fold the cloth back over the staples.
2. Spread glue onto the stile.
3. Fold the cloth back down onto the glue.
4. Smooth the cloth down with a wood block.
5. Carefully stretch the cloth across the frame.
6. Allow it to "belly" to the floor in the center.
7. Be careful at the corners. There will be extra material because of the bellying of the cloth. Be sure the fabric does not pull or wrinkle.
8. Repeat the stapling-gluing process on the other stile and on both rails.
9. *Do not place any glue on toggles or corner braces.*
10. Now staple one-half inch in from the outer edge of the frame around all four sides.
11. Flameproof the cloth with the same solution that was used on the frame.

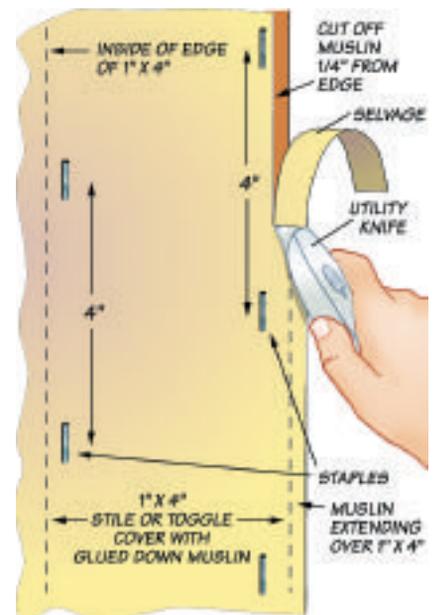
You are now ready to **size**, or paint on a glue-water mixture, a process that prepares the cloth in the following ways:

- It seals the pores.
- It provides a good painting surface.
- It stretches the cloth like an artist's canvas.

The easiest sizing to use is made from a commercial cold-water sizing to which a little whiting has been added. Some brands of sizing need a little more water than the directions on the box indicate. To see whether sizing is properly thinned, dip your fingers into the mixture. They should tend to just stick together. After the sized muslin dries, use a razor knife to trim the selvage (waste) off one-quarter inch from the outer edges of the stiles and rails. Do not trim the cloth flush with the outside edge of the flat, or the cloth will be pulled loose when the flat is handled.

CUE

You can approximate all measurements for placement of the hardware except for the tie-off cleats, which must be exactly two feet from the floor to facilitate lashing.



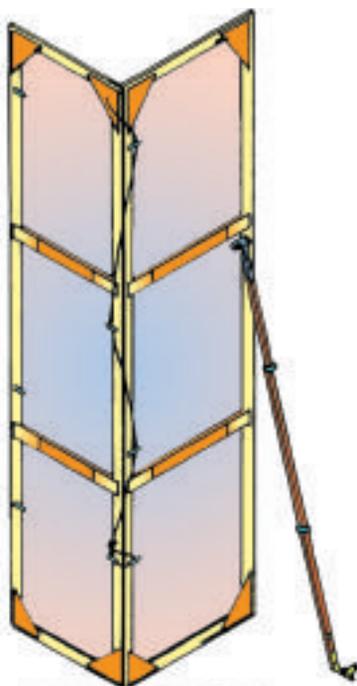
CUE

When constructing a flat, **DO NOT** wrap the cloth around the frame and staple it to the back side. If you do, the frame might bow.

A crew puts the finishing touches on a large backdrop.



To finish the flat, put a length of rope, called a lash line, through the hole drilled in the upper right corner block, knot the end, and pull it back tightly. Cut the rope six inches longer than the flat.



FLATS LASHED TOGETHER
STAGE BRACE SECURED
WITH STAGE SCREW

ERECTING THE SET

Flats can be either lashed or hinged together. If you plan to hinge all scenery, every hinge should be matched using loose pin (backflap) hinges. Tight pin hinges are good only if the hinges are to be removed after the production. If only one set is required for the play and if it is permissible to nail into the stage floor, it is usually advisable to **floor block**—to tack a small block of wood to the floor on both sides or each union where two flats meet. This keeps the walls straight and strengthens them. Stop cleats or stop blocks may be placed on the back of flats to prevent one flat from being pushed behind the other, especially at sharp angle junctions. Walls that shake and rattle when a door is slammed have been identified

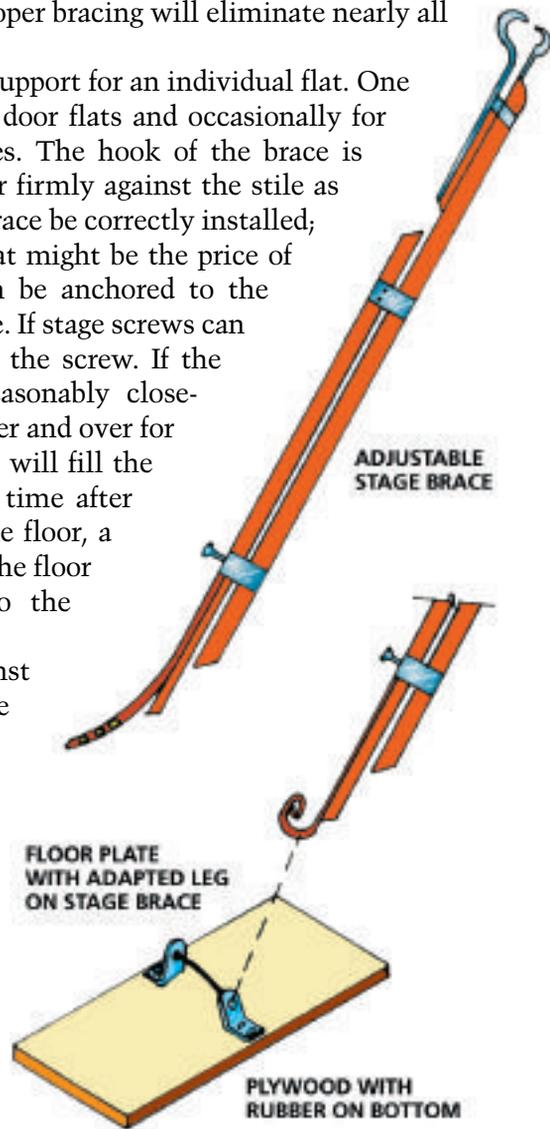
with amateur theater far too often. Proper bracing will eliminate nearly all such distractions.

Adjustable stage braces provide support for an individual flat. One brace is used for each flat except for door flats and occasionally for window flats, which need two braces. The hook of the brace is inserted upside down and turned over firmly against the stile as shown. It is very important that the brace be correctly installed; a hole in the muslin and a wobbly flat might be the price of incorrect installation. The brace can be anchored to the floor by stage screws or by a floor plate. If stage screws can be used, drill a hole before inserting the screw. If the wood forming the stage floor is reasonably close-grained, the same hole can be used over and over for many years. (The dust from the stage will fill the hole sufficiently to secure the brace time after time.) If holes cannot be drilled in the floor, a wood block may be lightly tacked to the floor and the stage screw anchored into the block.

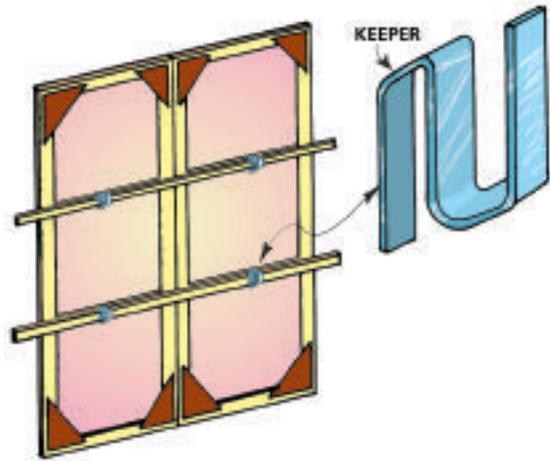
When there are restrictions against the use of any nails or screws in the floor or when the wood is too soft to hold such hardware, a floor plate is an easy solution. A floor plate is simply a piece of plywood with a nonslip rubber pad on its underside and a special hardware adapter, which any school shop can make, bolted to the brace. Stage weights or concrete blocks are placed on top of the floor plate to hold it in place. Pieces of two-inch lumber will work satisfactorily if there is not enough time to make floor plates.

Another type of bracing is the **jack**. A jack is a triangular wooden brace hinged to fold out of the way or placed on wheels to allow large units to be moved more easily. Jacks are often used with set pieces and ground rows. Similar in function to the jack is the **foot iron**, an L-shaped piece of strap iron attached to the back of the flat and anchored to the floor with a stage screw. Foot irons are most often used when there is insufficient space for jacks or braces.

The use of keeper hooks is another means of strengthening walls. Wherever there are two or more flats in a straight line, these handy pieces



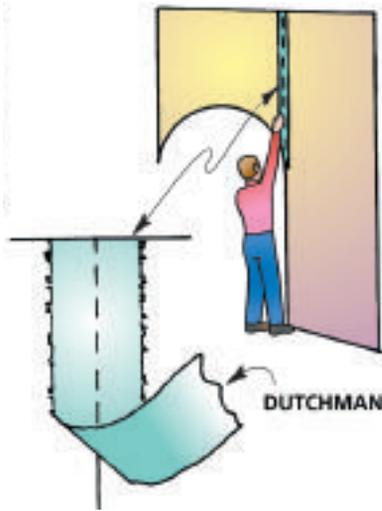
of hardware can be hooked over the top and toggle rails of each flat, and a stiffener board can be dropped into the notches, making the entire wall section one solid unit. Some technicians prefer hinged stiffeners, but keeper hooks are convenient, quick, and effective and can be made by any metal shop.



Once the set is assembled, apply the dutchman. A dutchman is a strip of muslin four to five inches wide used to cover the cracks between flats.

A dutchman is never used on a set that is to be shifted, except booked flats or screens. The dutchman is dipped in sizing, placed over the crack, and brushed down smoothly. If flats are perfectly matched, a strip of masking tape can be substituted for a dutchman.

Novice grips can have a difficult time trying to move flats, but there are some simple techniques that make the task far less awkward.



Edging One grip lifts a flat from the floor to a position for moving by edging, or getting the flat up on one side. Another grip grasps the stile and pulls the flat up.

Walking Walking a flat requires two or three grips. One grip puts a foot against the bottom rail to steady the flat, and one or two others lift the top rail, gradually raising the flat to an upright position by moving hand-over-hand on the stiles.

With two grips, the one with his or her foot against the bottom of the flat should also hold onto a stile to guide and steady the flat.

Floating The best and safest way to lower a flat is by floating. One grip simply places a foot against the back of the bottom rail, pushes the flat over, and allows it to fall or float to the floor face down.

Running Moving a flat is called running it. A grip grasps an upright flat with both hands on the stile on the side toward which the flat is to go, lifts that edge slightly, and slides the flat along without actually lifting or carrying it. A grip should not try to grasp both stiles and move the flat because the flat will act like a sail, pulling the grip forward or falling backward on him or her.

CUE

It is wise to wear goggles and a dust mask when floating a flat because dust will rise even from a clean floor.

Application ACTIVITY

Using a large piece of cardboard or a similar object, practice methods of handling a flat that are discussed on the previous page.

PAINTING SCENERY

Painting the set is certainly one of the important steps in the completion of a set, but it does not need to be the chore it often seems to be. One of the problems faced by a less-experienced production staff is choosing and handling scenic paints. There are certain paint qualities that are worth considering, as well as a few approaches that can be taken.

1. **vinyl, acrylic-base scenic paints** Colors are pure, and costs are fairly reasonable. These are generally recommended for stage settings. At least one manufacturer features a line of paint in a form designed for high school use.
2. **ready-to-use casein paints** Their cost is higher than that of vinyl acrylics, and fewer colors are available. Casein is more water repellent than dry color and can be used for scenery placed outside or in damp locations.
3. **latex paint** Readily available and inexpensive, latex covers well, will not bleed through, and cleans up easily with soap and water. A good paint or hardware store can mix almost any desired color. It might be less expensive, however, to start with a base, either an existing paint or a pastel base from a paint store, and add universal tinting colors, also available at paint stores. A disadvantage of latex, however, is that when it is painted heavily on muslin, the cloth absorbs the paint, causing the life of the cloth to be shortened and the paint to crack.

After the paint has been chosen, the next step is to apply the base coat. For best results, apply paint in random strokes or in figure eights. An uneven base coat is better than a smooth finish, which has a flat appearance and emphasizes all the flaws in the set. Some scenic painters **scumble** the base coat, which requires two or more brushes and two or more tones of the base color. Paint each tone on a small area and blend the tones together. The paint will set unless you work quickly.

After applying the base coat, highlight and shadow the set and then texture it. Highlights and shadows are essential if the scenery is to be



CUE

The texturing process is most important for a good paint job. The texture coat hides flaws, dutchmen, and patches from the audience.

convincing and alive. Before applying these realistic dimensional touches, the painter must consider the primary light source, that is, the direction and cause of the predominant light. Moldings, paneling, wainscoting, shingles, siding, bricks, and rocks must be carefully painted, even when they are built in three dimensions. You can create realistic bricks by applying a base coat of mortar color and using a rubber sponge block cut to brick size. Press the sponge, dipped in paint, onto the scenery. Use from two to four colors such as red, gray, dark yellow, and green. You can also cut three-dimensional bricks and rocks from Styrofoam™ and glue them to plywood. Cardboard works well for making shingles.

A painter here works on a flat. Even though he is just a few feet away from the flat, he must imagine what his paint strokes will look like to an audience member in the last row.



There are several methods of texturing, any one of which may work well for your particular sets.

Spattering is the most common method of texturing. Use at least two colors, one a shade darker and the other a tint lighter than the base color. You may also use the complementary color to blend and harmonize the colors in the set. Dip a four-inch brush into paint that has been diluted one-third to one-half, wipe it “dry” on the side of the pail, and shake the brush once onto an old flat or dropcloth. Then stand a short distance from the set and strike the handle of the brush against a board held by the other hand, causing drops of paint to spatter the flats. This is a difficult technique to master, so practice on an old flat first. The dark spattering coat should normally be heavier at the top of the walls to make them appear shadowed. Spattering can also be done by using a very thin paint in a plastic spray bottle.



Rag rolling is a second method of texturing. Dip a rag or rolled-up piece of frayed burlap in paint, then roll it over the walls to make them look like rough plaster.



Stippling is a texturing method that involves gently touching the flat with a sponge, a crumpled rag, or the tip of a dry brush which leaves clusters of paint drops. Be sure to rotate the tool you are using to avoid creating an obvious pattern.



Featherdusting is another popular and quick texturing technique. Dip an inexpensive featherduster into the paint, shake it off over an old flat or dropcloth, and gently press it against the flat. By turning the handle slightly, you will get a different pattern each time the duster is applied. Featherdusting is especially good for foliage effects.



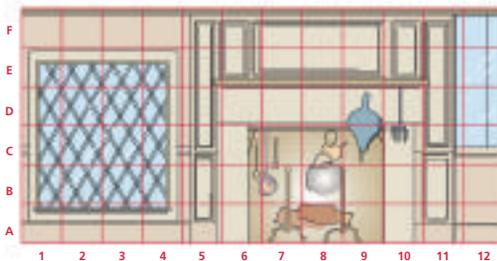
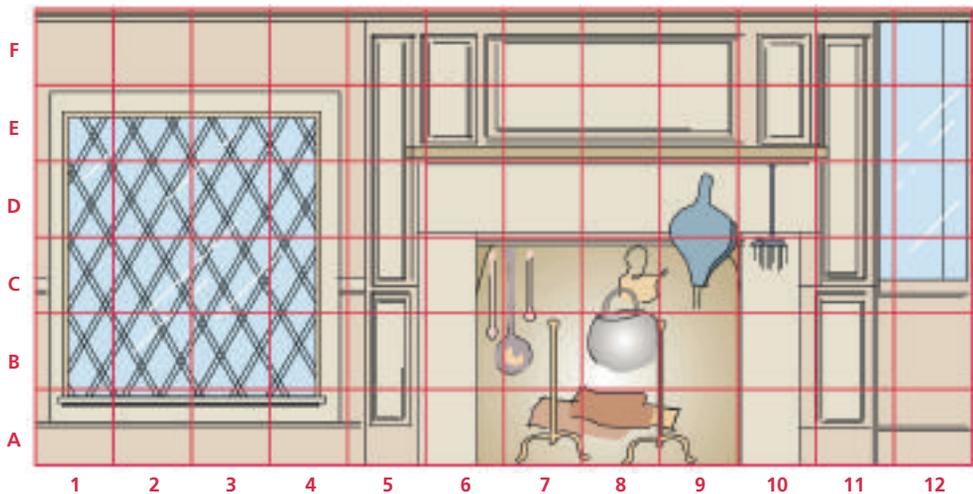
Dry brushing may be used for wall texturing or for simulating wood grain. For walls use a dry brush, stroke in one direction with a light color, and repeat with a dark color. For a woodgrain effect, use long, straight strokes with a dark color, and then repeat the process with a lighter color.

Scenery painting is an art that develops with time, experience, and experimentation. Watch what happens

to colors and textures under various lighting effects, and then consider how you would represent them scenically.

Profile scenery and drops are challenges to stage painters because such scenery almost always represents a three-dimensional object or a perspective scene. **Gridding** is the process used to make the enlarging from a sketch to a drop. Mark off the drop into one- or two-foot squares and scale the sketch proportionally, as shown. You may also transfer a drawing by using a projector. Most copy machines can copy the drawing onto a piece of clear plastic to produce a transparency. This can then be projected onto the drop and outlined. It is important, for either of these methods, that the drawing be a simple outline with clean lines.

One of the most challenging painting tasks for the inexperienced scenery painter is the painting of rock walls. These often end up looking like strange masses randomly placed in a large amount of gray mortar. On a real wall the rocks are laid in a layer of mortar, light causes highlights and shadows, and the texture and the color of the rocks give the viewer the feeling of bulk and weight. Such scenery should be painted using at least four colors with a wet-brush technique, which involves blending the colors while the paint is wet.



TRANSFERRING A BACKDROP DESIGN FROM THE SKETCH TO THE DROP THROUGH THE USE OF A SCALED GRID

Painted wallpaper patterns can be applied using stencils, carved blocks of rubber sponge or carpet padding, pattern rollers, and old paint rollers. Stencils can be cut out of plywood or out of stencil paper that is strengthened by a coat of acrylic, placed in a wooden frame, and reinforced with wires.

Application ACTIVITY

Try your skill at one of the methods of texturing, or design a wallpaper pattern by first making your own stencils. For the wallpaper you can use manila paper or any other paper to which paint will adhere.

SOLVING PROBLEMS

Because many plays and musicals require different scenery effects as well as scenery and set changes, ingenuity can be helpful when trying to achieve these effects and changes efficiently.

In addition to various methods of painting to achieve different scenery effects, there is also a repertory of materials that can be used to create three-dimensional props and scenery. Two materials seem to be the most frequently used: plastics and papier-mâché.

1. Plastics have many uses on the stage. Expandable plastics can be formed into rocks or almost anything for which a mold can be formed. Because Styrofoam™ can be cut, shaped, glued, or pressed so easily, it can be made into bricks, molding, statues, and trim. It can also be painted to replicate a variety of different textures.
2. Papier-mâché has long been a special-effects material for the stage. You need wheat paste or stage sizing, strips of newspaper or paper towels, and chicken wire, wire cloth, or cardboard. With these supplies, you can create small and large objects for the set.

Many problems might be encountered onstage. The complexity of the production might determine their number or severity. Proper planning should curtail many of them, however. Some common problems and their solutions appear on the following page.

CUE

Safety rules for handling plastics: Have adequate ventilation. Wear protective clothing and masks.

Insufficient stage space

- If the stage is shallow or lacks wing space, it can be extended out into the pit area or over the front center seats.
- A runway can be built out from the center or can enclose the pit and the orchestra.
- Acting areas can often be added to the side of the apron with platforms.

Inadequate fly space

- Double, or trip, drops for storage.
- Use short drops that can be raised as high as possible and concealed with low-hung borders.

Overly large stage opening

- Lower the grand drape to change the height of the opening.
- Add a false beam or ceiling to replace the first border.
- Add a false proscenium, a teaser, or tormentors to decrease height and width.

Side areas that need masking

- Use portals or tabs similar to false prosceniums.
- Use screens, wings, hanging banners, and backs of double-walled wagons.

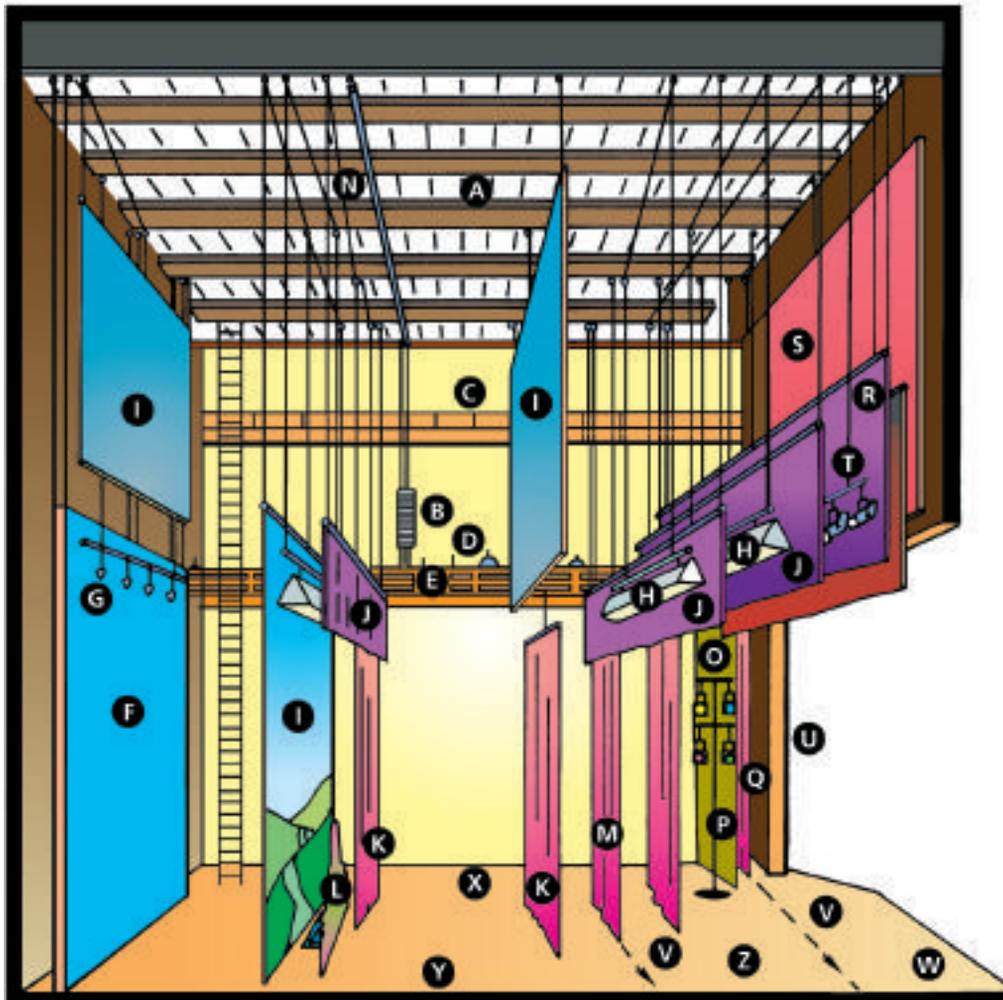
Surfaces unsuitable for acting

- If floors are rough, sticky, or noisy, use a reversible canvas floor cloth—brown on one side and green for grass on other side.
- Use carpets to reduce noise and provide a realistic appearance to a room (carpets should lie flat or be tacked down).
- Pad stairs, wagons, and platforms to lessen noise.

Application ACTIVITY

Choose a scene from a play and identify any problems that might exist in staging that scene on your school stage. Suggest solutions.

CUTAWAY OF A STAGE



- | | | | |
|---|-------------------------|---|-------------------------------|
| A | Gridiron | N | Spare batten |
| B | Counterweight system | O | Tormentor |
| C | Weight floor | P | Tormentor "tree" or boomerang |
| D | Pin rail | Q | Act curtain |
| E | Fly deck (gallery) | R | Grand drape (valance) |
| F | Sky drop or cyc | S | Fire curtain |
| G | Cyclorama floods | T | Spotlight batten (bridge) |
| H | Border lights | U | Proscenium arch |
| I | Drop | V | Curtain line |
| J | Teaser (border curtain) | W | Apron |
| K | Leg | X | Wings |
| L | Ground row | Y | Acting area |
| M | Traveler | Z | "In one" |

SHIFTING THE SETTING

Shifting the scenery requires well-trained crew members who know what their jobs are and how to get them done efficiently.

The stage manager “runs the show” backstage.

Grips move flats, *periaktoi*, and set pieces.

The flycrew raise and lower flown scenery and draperies.

The prop crew check properties in and out as they are set or struck.

The set dressers set and strike a set’s finishing touches.

There are many ways to change scenery in addition to those discussed earlier in this chapter. A booked set may be dropped inside an existing set. Screens can also be used for a set within a set. Drops are the most frequently used type of flown scenery. Ground rows are usually brought in to mask the junction where the drop meets the floor, and portals and false

prosceniums are used to mask the sides of the stage. The masking of the wing areas, a problem associated with all exterior sets and now quite regularly associated with the musical play, is a challenge to the designer—the solution to which is often an even greater challenge to the crew. Once again, a black cyclorama can help simplify the problems. Even a full curved sky cyc will close off the audience’s view of the backstage areas. But a sky cyc might make entrances and exits difficult.

Wagon sets are another means of executing scene changes.

A set is placed on a wheeled platform that can be rolled out onto the stage. A type of wagon arrangement that often works quite well is the jackknife. The jackknife wagon, shown on the next page, is stored perpendicular to the curtain line on the side of the stage, usually behind the tormentor or false proscenium, and is pivoted out when needed. A second wall can be attached back-to-back to the wagon, making two sets possible for each wagon. Wagons require storage space in the wings, which may be lacking, but they are often the best solution when fly space is not available.

Some directors have complained that the elevation of the wagon destroys the illusion they desire and eliminates the use of the apron unless the actor steps down from the wagon. This problem may be corrected in one of two ways.

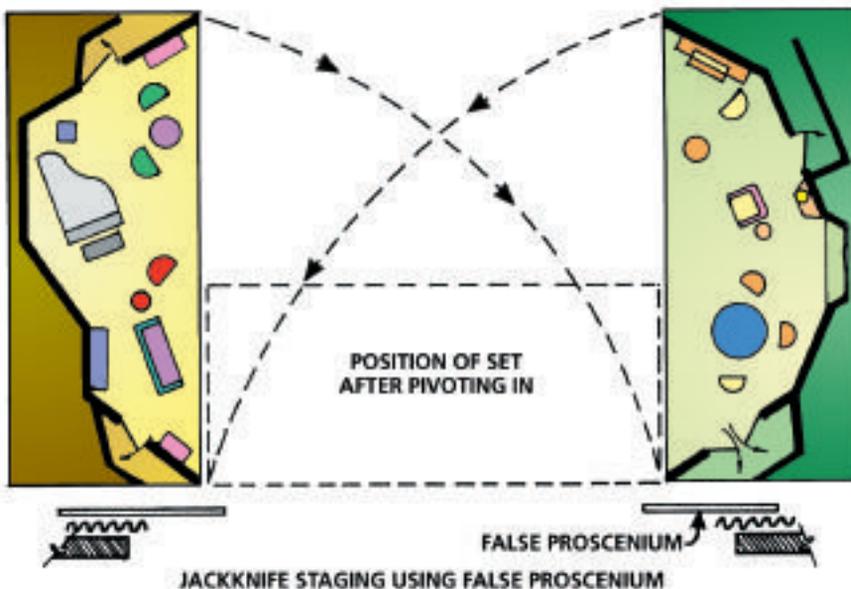
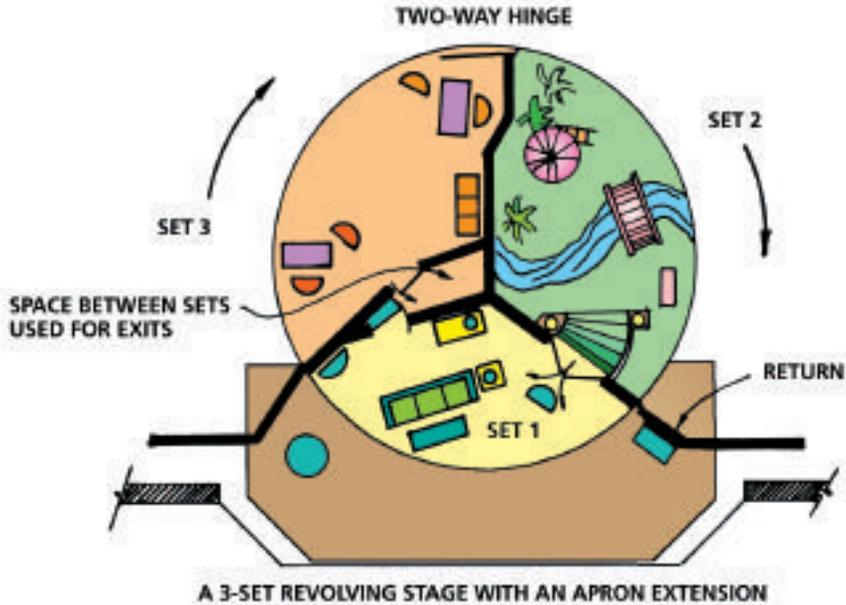
1. Treat the wagon as a natural elevation, such as a hallway above a sunken living room or a porch with the apron as the lawn.
2. Build up the apron with platforms that are flush with the front edge of the wagon. Treat the apron as an extension of the wagon set. Add hinged returns to the side walls of the set to frame the apron acting area. This method takes more work but is worth the effort.

CUE

It might be necessary to make changes in full view of the audience. The “invisible” stagehand—clothed in black—might be your only recourse.

A circular revolving stage can be used if you have the budget, equipment, time, and skill. As many as three sets may be placed on a revolving platform. However, revolving stages are expensive to build and take special mechanical equipment to rotate smoothly. It is possible to build stages that can be moved manually. If this is to be done, however, it would

TWO WAYS OF CHANGING COMPLETE SETS



CUE

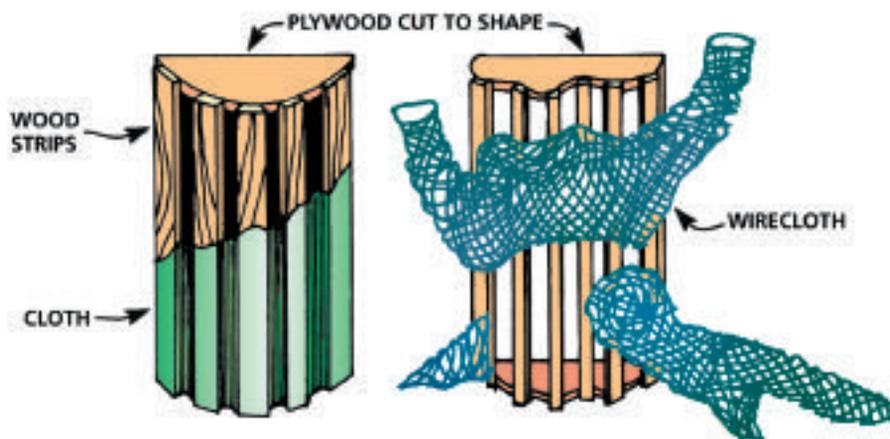
Appropriate scenery and set dressings should support the play, not overwhelm it.

probably be simpler and certainly more economical to bolt wagons together to make a revolving square with two sets back to back. Of course, once a set is out of view of the audience, it can be redressed for a new setting.

On many stages, the counterweight systems have been replaced by electric winches. This has often caused more problems than it has solved. The winches are slow, and the number that can be operated at one time is often limited.

Scenery that can be carried or rolled onto the stage, such as benches, lampposts, rocks, and trees, are called set pieces. Before designing and building set pieces, the scenic designer must decide how the unit will be used. Is it only for show, or must it support weight or operate in some manner? Those pieces that operate, such as windows that can open, lamps that can light, or a tree that can support an actor sitting on a branch, are called practical or practical-usable. Because theater is illusion, and time and expense are always to be considered, few set pieces are built to be practical unless the script requires it. Columns, trees (both shown below), and rocks may be plastic, that is, three-dimensional, or simply two-dimensional cut-outs. Three-dimensional pieces allow for more light and shadow effects, but cut-outs might better convey a stylization and the feeling of illusion.

SET PIECES: COLUMNS AND TREES



Stage Safety

The safety of actors, crew members, and the audience is always of great concern. Power equipment, stage weights, electric winch systems, paints, plastics, and protruding nails are just a few of the materials that might lead to physical injury.

The fire curtain and the fire doors should be checked on a regular basis to make sure that they are operating properly. The deluge systems that replaced asbestos curtains have many design and operation problems that often make them a threat more than a safety feature. The emergency controls should not be situated so that they can be activated accidentally. The shut-off crank must be accessible and never be chained off. The water should not drain into the orchestra pit. If it does, there should be several drains to carry off the water, and the electric outlets in the pit should be at least a foot from the floor. Despite these precautions, a pit-draining deluge system poses a real threat to musicians in the pit because of the electric cords that are attached to music-stand lights and musical instruments.

General Stage-Safety Rules

1. Know the location and operation of all fire extinguishers and fire alarms.
2. Know what to do if the sprinklers, the fire curtain, or the deluge system is set off.
3. When you hear "Heads!" move quickly out of the way. Scenery is coming down.
4. When you are above the stage and using a tool such as a wrench to adjust lights or tighten bolts, always tie the tool to a line attached to your belt so that it will not fall.
5. When you remove a weight from a batten, be certain that an equal amount of weight is removed from the counterweight system.
6. If an imbalanced counterweighted line takes off, do not try to stop it by hand.
7. Always wear goggles when operating power equipment and floating flats.
8. Do not wear loose-fitting or fringed clothing or dangling jewelry when operating power equipment or when moving around gears or winches.
9. Always wear shoes, preferably safety shoes.
10. Remove all protruding nails in boards, and keep nails swept off the floor.
11. Be sure there is adequate ventilation when using materials that emit toxic fumes.
12. Know the number and wattage of instruments plugged into a circuit before turning it on.
13. Do not smoke or allow anyone else to smoke backstage.
14. Be alert and concerned about your safety and the safety of others.



Neon lights against the dark background emphasize the colorful costumes in *Crazy for You*. The lights and colors complement the play and add to its impact.



Scenery and the Performance

The drama student should recognize that scenery is an integral part of modern play production. However, scenic design has developed as a complement to the play and might lose its impact if looked upon as an end in itself. If scenery swallows up the performer, the costume, the makeup, or the acting; if the scenery is in poor taste or is not aesthetically satisfying; if inappropriate sets cause the mood of the play to be lost; or if the set is a showpiece for a talented designer or for exuberant art students and does not serve the play—then the purposes and intent of the playwright and the director become distorted and meaningless.

Scenery should add to and never detract from the overall merit of a production. A little imagination, some inexpensive materials and equipment, and the enthusiasm and talents of high school students can easily bring to the audience a setting that enhances the total production by making it an “everything-seemed-to-go-together” performance.

In order to accomplish this goal, high school directors, designers, and production committees should work together to carefully select scenic elements, emphasizing those they wish to convey to the audience and minimizing or eliminating those that would not make a positive contribution. It is often the frequently overlooked little things that may make a realistic set look complete—the right number and kinds of pictures on the wall; the knickknacks on the shelf; the flowers in the vases around the room; the choice of carpets, drapes, lamps, and furnishings; a flickering fire in the hearth; the shadow lines and texturing on the walls. It is usually the smallest number of elements with the greatest impact of identification and meaning that make a set the most satisfying.



By using realistic tile flooring and props, the set designer for *FOB*, by David Henry Hwang, created a set that gives the production a realistic atmosphere.

CUE

Selecting a few perfect elements can create an atmosphere more efficiently than filling a stage with scenery and furniture that is not quite appropriate for the production.

**Summary
and Key
Ideas**

Summarize the chapter by answering the following questions.

1. Why should drama students study stagecraft?
2. What is the purpose of scenery? How can it enhance a performance?
3. How has scenic design evolved over time?
4. Name and describe three types of sets.
5. What things must a designer know before designing a set?
6. What are four artistic considerations in building a set?
7. Describe the steps in constructing a flat.
8. What is the best fabric for flats? What is the next best choice?
9. Which crew members are responsible for shifting scenery?
10. List at least ten safety rules for staging a play.

**Discussing
Ideas**

1. How does “using the least to say the most” apply to stagecraft?
2. After watching a play, analyze the work of the set designer. How many sets were there? What types of sets were used? What colors dominated? What did the set contribute to or take away from the play?
3. Describe a realistic set for the balcony scene of *Romeo and Juliet*.

FOCUS ON**Safety**

Constructing another world on the stage can mean real-world dangers. That’s why it’s best to make safety a priority for all of the people involved in a production, right from the start. Preparation and attitude are key. All cast members should be aware of hazards and should be prepared to deal calmly and effectively with problems that arise.

Compiling Safety Guidelines Find books, magazines, or Internet sites that give safety information and guidelines for theaters or theater companies. Some companies and theater schools post their guidelines online. (Always check with your teacher before using

the Internet for research.) Compile a list of information or tips that are new to you or that seem especially relevant to your venue. Share your research with the class.

Practicing Safety Measures Devise a situation that would test another student’s knowledge of appropriate safety measures. Then get together with a partner to exchange situations and discuss solutions. Do this several times to make sure that both of you have a good handle on the guidelines. You might want to perform this exercise every time your class puts on a theatrical production.

REVIEW WORKSHOP

STAGE SETTINGS

INDEPENDENT ACTIVITIES

A Play Without Scenery Because of budget considerations, scenery has been eliminated for this year's play. With this in mind, choose a play in which ideas are more important than locale. You might consider plays like *Whose Life Is It Anyway?* or *The Diary of Anne Frank*. Using only objects such as platforms, boxes, and ramps, sketch what the stage would look like for at least two scenes of the play. Include a written explanation of how

this bare-bones set will intensify and reflect the meaning of the play.

Visual Metaphor Sometimes a central visual metaphor can be very effective in a set design. Read over a play that you know well and select a visual metaphor for it. For example, you might choose the fragile unicorn in *The Glass Menagerie* or a tombstone for *Death of a Salesman*. Then decide how you will use the metaphor. How many set pieces might resemble it? How could it be enlarged and used in all the settings? Create a perspective drawing of your metaphorical set.

Cooperative Learning Activity

Troubleshooting Imagine that your drama class wants to present a play such as *Barnum* or *Bye Bye Birdie* that demands more physical space than your stage and auditorium can accommodate. With a group of your classmates, brainstorm ways that you might make better use of the available space or compromise on the scope of your presentation. For example, you might build a thrust stage or add platforms to the sides of the stage. Brainstorm ways to make the staging possible, come up with some specific suggestions and drawings, and present your ideas to the class. Discuss with them whether your design will make an effective production or interfere with the integrity of the play.

Across the CURRICULUM Activities

Woodworking Choose a play that has several different locales, such as *The Miracle Worker* or *The Matchmaker*. Build a three-dimensional model of a multiple set with distinct acting areas. Decide how you will separate one area from another.

Art Choose a scene from a favorite play and design the setting in several rough sketches. Then demonstrate for your classmates how to paint scenery. You may want to concentrate on one very specific task, such as different ways to create texture, or you may want to illustrate a more general procedure, such as the way gridding is done. As an alternative, show your classmates how to make stylized plants, trees, and flowers out of papier-mâché for a children's play.