Technical Theatre Curriculum Guide

A High School Elective

2011 – 2012

Curriculum Committee

Ike Stoneberger
John Wells
Tim Willmot

LOUDOUN COUNTY PUBLIC SCHOOLS

Dr. Edgar B. Hatrick
Superintendent

Sharon Ackerman
Asst. Superintendent for Instruction

Eric L. Stewart
Director of Curriculum & Instruction

Dr. Michele Schmidt Moore
English Instructional Supervisor

David Arbogast
English Specialist
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Technical Theatre

Course Description

The course is an exploration of the duties of stage technicians and their contribution to the total aesthetic effect of a dramatic production. Topics covered will include design research and principles; scene shop organization; painting and construction techniques; equipment use and maintenance; principles and application of sound, lighting, and computer technology; the use of special effects; costume and makeup considerations and selection; publicity and business management; theatre safety; and the function of technical stage personnel in production work. Technical theatre will incorporate academic study and hands-on application of knowledge and skills.

Course Objectives

Students will—

- Explain the basic physical and chemical properties of the technical aspects of theater (e.g., light, color, electricity, makeup)
- Analyze a variety of texts from cultural and historical perspectives to determine production requirements
- Demonstrate the ability to apply aesthetic criteria to make artistic choices
- Develop designs that use visual and aural elements to convey environments that clearly support the text
- Demonstrate an understanding of the safety requirements and efficient use of tools and materials used in the theater shop
- Apply technical knowledge and skills to collaboratively and safely create functional scenery, properties, lighting, sound, costumes, and makeup
- Explain how scientific and technological developments have impacted set, light, sound, and costume design and implementation for theater, film, television, and electronic media productions
- Identify the primary duties of a stage technician
- Create production schedules, stage management plans, promotional ideas, and business and house procedures for a dramatic production
- Identify career opportunities for students trained in the technical aspects of theater
- Develop a resume for work experience in professional venues
- Assess the effectiveness of stagecraft as it affects a specific dramatic production
- Demonstrate the ability to strike a set after production
Standards of Learning

The course objectives for Technical Theater will correlate to the following Virginia SOL:

English  9.4, 9.5, 9.8, 10.4, 10.6, 11.3, 11.4, 11.6, 12.4, 12.6

Math    G.12

Science PH 6, 11, 13

Technology  9-12.1, 9-12.2, 9-12.3, 9-12.5, 9-12.8

Theatre Arts  T1.4, T1.11, T1.13, T2.1, T2.2, T2.6, T2.10, T2.15, T2.18, T3.1, T3.2, T3.5, T3.7, T3.9, T3.14, T3.15, T4.1, T4.7, T.13
## Technical Theatre

### Introduction

**Goals:**

By the end of this unit, students will understand that—

1. The quality of production work for theatre performances is enhanced by the study and application of Stagecraft skills in a comprehensive theatre arts program.
2. The study and function of technical personnel and experiences prepares students for careers in technical/management aspects of theatre.
3. Student interest and skills development in technical theatre are more easily identified in a functioning technical theatre classroom.
4. Skills gained in a technical theatre course of study will impact lifelong learning.

**Understandings:**

1. Technical theatre is a hands-on learning situation that deals with all of the non-acting components of theatre study.
2. The successful application of technical theatre skills directly influences the quality of theatrical productions.
3. There is an aesthetic as well as a literal, practical aspect of every technical theatre skill.
4. Theatre students understand and support the collaborative nature of their art form.

**Essential Questions:**

1. What is the role of a theatre technician?
2. What are the technical aspects of theatre?
3. What does it mean to be a responsible theatre technician?
4. How can theatre technology enhance the aesthetic responses of observers of dramatic productions?
5. What career opportunities are available for theatre technicians?
6. How can changes in theatre technology affect aspects of theatre productions?

**Knowledge:**

The student will know:

1. The identity, definition, and use of basic technical theatre terminology.
2. The responsibilities of technical personnel, including designers, creators, and operators.
3. The technical components of theatre – scenery, props, lighting, sound, costuming, and makeup.
4. How to maintain stage properties, costumes, equipment, and facilities according to established classroom standards.
5. How to offer viable solutions to technical theatre problems.
6. How to evaluate technical choices in formal and informal performances.
7. How to analyze scripts to determine their production requirements by referencing historical and cultural contexts.
8. How to study, render, plot, and build, either to scale or in full, scenery, costumes, and
properties.
9. The basic responsibilities of backstage and front of house personnel and how to execute those responsibilities professionally and proficiently.
10. How to create production and rehearsal schedules, contact sheets, cue sheets, lighting and sound plots, and costume schedules for a production.

Skills:

Students will be able to:

1. Pass a test of technical terminology and their practical applications.
2. Research, discuss, and demonstrate various methods of approaching solutions to technical theatre problems.
3. Evaluate and critique design/technical choices based on an established criteria and class standards.
4. Analyze a script based on technical production needs either from a historical or from contemporary standards.
5. Organize a scene shop and work environment for efficiency and ease.
6. Demonstrate a knowledge of various stage designs and functions.
7. Strike and store lighting instruments, sound equipment, scenery, and properties.
8. Develop and maintain a resume and a portfolio of work experiences for educational or professional venues.
9. Apply and interview for career or study opportunities in technical theatre.

Assessment Evidence

Direct Evidence:

1. Pass a paper and pencil test designed to demonstrate student knowledge of:
   - basic and specialized technical terminology
   - physiology of the stage venue or performance space
   - the basic design elements of scenery, costume, and properties
   - the duties and responsibilities of technical theatre personnel
2. Volunteer, journal, and document technical responsibilities of a production.
3. Create and maintain a portfolio of all technical experiences and submit for review.
4. Present oral and visual presentations of specialized topics.
5. Participate in a production as one or more of the following positions:
   - Stage Manager or Assistant
   - Technical Director or Assistant
   - Lighting, Scenery, Sound, Props, Costume, or Makeup Designer or Assistant
   - Master Electrician or Assistant
   - Master Carpenter or Assistant
   - Sound or Lighting Board Operator
   - House Manager, Assistant, or Usher
   - Stage Crew
   - Dresser.
6. Attend, observe, and report, either orally or written, technical rehearsals for each production.
7. Attend professional, semi-professional, or amateur productions and submit a detailed report of the technical aspects/choices/executions of the event.
8. Participate in a *post mortem* discussion of established and formal criteria following each production.
### Technical Theatre

#### The Physical Theatre

**Goals:**

1. The student will understand the general layout of the theatre space and be familiar with various rooms, spaces, and hallways of the overall complex.
2. The student will demonstrate comprehension of basic, introductory, level of theatrical terminology and theatrical equipment.

These goals address standards: T I.4, T I.13

**Understandings:**

1. The essential geography of the theatrical space(s) and where things are located is a first consideration before embarking on any technical theatre work.
2. Familiarity with basic theatrical terminology is a first consideration before embarking on any technical theatre work.

**Essential Questions:**

1. How do you know where to find things in the theatre?
2. How would you direct someone to find something in the theatre complex?

**Knowledge:**

The student will know:

1. that the theatrical complex encompasses much more than just the actual stage area
2. that there is a backstage area consisting of wings and crossover
3. that there is a catwalk area above the audience area
4. that there are dressing rooms for males and females
5. that there is a designated space for light board and sound board
6. that there storage spaces for costumes, lumber, props, and scenery
7. that the stage/auditorium is a multi-use space and is constantly shifting and changing its complexion
8. that theatre has a specific, unique language and terminology

**Skills:**

The student will be able to:

1. locate and retrieve personnel or items from anywhere within the overall theatrical complex
2. escort someone to any designated location within the overall theatrical complex
3. understand appropriate terminology of the theatrical complex
4. identify the difference between stage right and stage left
5. identify the difference between upstage and downstage
6. identify the difference between house right and house left

Assessment Evidence

Direct Evidence:
The student will:

1. successfully identify the location of wing space and crossover space
2. successfully identify the location of the catwalk
3. successfully identify the location of dressing rooms
4. successfully identify the location of the light board and sound board
5. successfully identify the various storage spaces for costumes, lumber, props, scenery, and other spaces
6. converse with other personnel in the theatrical complex using the appropriate language and terminology

Learning Plan

Key Actions:

1. Arrange to take the students on a thorough, all-encompassing guided field trip of your entire theatre complex. Conduct question and answer along the way.
2. Spend time teaching, or reviewing, stage directions (US-upstage, DS-downstage, C-center, SR-stage right, SL-stage left, DSR-downstage right, DSL-downstage left, USR-upstage right, USL-upstage left)
3. Spend time teaching, or reviewing, house directions (house left and house right)
### Technical Theatre

#### Theatre Safety

**Goals:**

1. The student will understand the need for safety awareness when working on theatrical productions and will develop an attitude of respect for safety considerations.
2. The student will demonstrate comprehension of general safety procedures and the safe use of specific theatrical equipment.

These goals address standards T 1.4, T 2.6, T 3.7, T 4.7.

**Understandings:**

1. Every element of technical theatre (e.g., makeup, lighting, sound, set construction, running crew, strike) has potential safety risks.
2. Safety issues should be the first consideration before embarking on any technical theatre work.

**Essential Questions:**

1. Where are you most likely to encounter dangerous conditions in the theatrical complex?
2. How could someone get hurt within the theatrical complex?
3. Whose safety am I responsible for?
4. Who is responsible for my safety?

**Knowledge:**

The student will know:

1. That a parental permission form must be submitted before any technical theatre work is undertaken.
2. Which tools and components require prior certification.
3. Which tools and components may not be used by a student.
4. How to store tools safely.
5. When to have a spotter for stage work.
6. How to work safely on a ladder, lift, scaffold, or catwalk
7. The location of the onstage first aid kit
8. How to use the materials in the first aid kit
11. How to operate lighting, sound equipment, and winch battens safely
12. How to store theatre properties safely
13. How to safely construct scenery
14. How and when to wear proper shoes, arm protection, cotton and leather gloves, safety glasses, bump hats and hard hats, dust masks, and hearing protection
15. Safety considerations for hair and jewelry
16. The conditions under which door warnings must be posted
17. The duties of a designated safety manager

**Skills:**

The student will be able to safely:

1. Use power tools
2. Apply make-up
3. Operate lighting, sound equipment, and winch battens
4. Store theatre properties and tools

**Assessment Evidence**

**Direct Evidence:**

The student will:

1. Turn-in completed parental permission form (Theatre Safety Manual, Appendix A)
2. Acquire certification in the safe use of catwalks, lifts, and power tools
3. Successfully complete a safety checklist (Theatre Safety Manual, Appendix I)
4. Demonstrate how to safely store tools and stage properties
5. Demonstrate proper use of the materials in the first aid kit
6. Demonstrate how to be a spotter
7. Locate the onstage first aid kit and the Theatre Safety Manual
8. Explain the purpose and use of each item in the First Aid Kit
9. Demonstrate proper use of proper shoes, arm protection, cotton and leather gloves, safety glasses, bump hats and hard hats, dust masks, and hearing protection
10. Demonstrate safe operation of lighting equipment, sound equipment, and winch battens
11. Demonstrate knowledge of safety considerations for hair and jewelry
12. Pass paper and pencil tests designed to show that the student knows:
   - which tools require prior certification
   - which tools and components may not be used by a student
   - when a spotter is required for stage work
   - how to use the Theatre Safety Manual to answer safety issue questions
   - the use of each item in the First Aid Kit
   - the conditions under which cotton or leather gloves must be worn
   - the safety considerations regarding hair and jewelry.
   - the conditions under which door safety warnings must be posted
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<th><strong>Key Actions:</strong></th>
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<tr>
<td>1. As a class, sit down and read-through the entire Theatre Safety Manual, line-by-line, item-by-item, stopping and starting to engage questions and inquiries from students, to give clarifications and explanations, and to mark any larger questions that need to be addressed by a supervisor.</td>
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<td>2. Create enough copies for the entire class to receive Appendices A and I, hand them out, and set a due date for Appendix A.</td>
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<td>3. Demonstrate the safe use of permitted power tools, and then have students demonstrate that to the teacher.</td>
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<td>4. Demonstrate the uses of each item in the First Aid Kit.</td>
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<td>5. Demonstrate safe operation of lighting equipment, sound equipment, and winch battens. Have them demonstrate that to the teacher.</td>
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<td>6. Demonstrate safe construction and movement of scenery. Observe students doing the same.</td>
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<td>7. Show students how to wear and adjust hard hats, bump hats, arm protection, safety glasses, dust masks, and hearing protection. Have them demonstrate that to the teacher.</td>
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<td>8. Teach students about safety issues regarding hair and jewelry.</td>
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Technical Theatre
Script Reading for Designers and Technicians

Goals:

Students will understand that the art of the theatre springs from the text.

These goals address standards TI.4, TI.11, TI.13, TI.2, TI.6, TI.10, TI.15, TI.18, TI.1, TI.3, TI.7, TI.9, TI.15, TI.1

Understandings

1. All designers and technicians must have a firm grasp of the content of the play.
2. Designers and technicians must communicate based on a common and agreed upon understanding of the play.

Essential Questions:

1. How are decisions made regarding design and execution of a play?

Knowledge:

Students will know that:

1. Artistic decisions relative to a play, ranging from broad choices of image to specific choices of fabric used for clothing and colors for individual gels, come from the text of the play.
2. Specific cues for sound, lighting, etc. are all found in or derived from action or dialogue in the text.
3. Choices of color and style are made based on a combination of mood, environment, time of day/year, and/or historical context found in the text.
4. Elements such as timing and nuance in lighting or sound control come from a thorough understanding of the play and the director’s intentions for the production.

Skills: Students will be able to:

1. Read a play and locate sound, light, prop, and scene change cues.
2. Effect or describe cues
3. Explain and defend choices for cues based on context of the script
### Assessment Evidence

#### Direct Evidence:

1. Students will read a play or section of a play and accurately mark all necessary cues.
2. In the course of discussion/technical meetings, students will explain/defend the need for various cues and how they should best be completed.
3. Students will participate as stage hands, board operators, or other technical personnel and effectively carry out instructions/cues.

### Learning Plan

#### Key Actions:

1. Select play or selections for reading. A one-act or 10 minute play is acceptable as long as examples of technical elements and internal changes are present.
2. Read aloud in class or assign as a take home.
3. Show samples of cues and technical notations from a working script or prompt book.
4. As a group, go through a section of script and mark necessary cues or changes.
5. As a group, discuss how changes should happen, i.e. should the lights fade or black out? How rapidly do the chairs need to be moved? Should the set change happen in darkness? Moderate light? Should stage hands be dressed as characters and change scenery as if they belong in the play? What is the intent of the sound effects? If purpose is to shock, the volume may be on the loud side. If it’s merely intended as background, it will need to be quiet.
6. Playing the role of director, offer varying approaches to “teching the scene” based on mood, environment, etc.
7. Whenever possible, include practical examples of the impact of technical elements on a scene. For example: have two students do a script in hand reading of some scene with a violent or angry ending. Then play with the lighting cue by blacking out, fading out to a two count, fading out to a four count, and fading out to a ten count. Discuss the impact of the various fades on audience members.
8. Repeat the above scene using either background or music of starkly different styles.
9. Repeat the above scene, then change some element of the scene by having a technician come out and move some small piece of furniture, perhaps when the scene has ended. Have the technician dress in black. Have a technician move the piece in street clothes. Try it again with an actor moving the scenery. The point here is to demonstrate the impact technical elements have on a scene and how some seemingly minor element can affect that impact.
10. Select a page or two from the script, have the cues/changes marked and agreed upon by the group, then do a “tech run” using students as board operators, stage hands, and script-in-hand actors.
11. Remember that in discussing the impact of technical elements, the end result for any technical component is to support and enhance the author’s message and 3-5 days.
Technical Theatre

Theatre Equipment and Operation

Goals:

1. The student will understand the various pieces of large equipment used in the successful production of a play.
2. The student will demonstrate the ability to safely use said pieces of equipment.

These goals address standards TI.4, TII.1, TII.2, TII.6, TIII.2, TIV.1

Understandings:

1. Use and operation of the light board.
2. Use and operation of a sound board.
3. Use and operation of various ladders
4. Use and operation of various power tools including, but not limited to power miter saw, electric drills, saber saw, jig saw, and reciprocating saw
5. Use and operation of manual or motorized winches

Essential Questions:

1. How are the various technical elements, such as lighting and sound, controlled during a theatrical production?
2. How are the plans for the construction of a set physically achieved?

Knowledge:

Students will know:

1. The basic functions/operations of a light board including turning the lighting board on, dimming and controlling house lights, dimming and controlling stage lights, using a master/sub-master, and blacking out.
2. The basic functions/operations of a sound board for amplifying live human voices including plugging in and controlling volume of microphones
3. The basic functions of computers, CD players, mp3 players, and other devices for producing sound effects and recorded music.
4. The purpose and safe uses for a step ladder and an “A” ladder for purposes of hanging, gelling and focusing lighting instruments as well as painting and basic set construction requirements.
5. The purpose and safe operating procedures for power miter saw, electric drills, saber/jig saws, and reciprocating saws for the construction of scenery.
6. The purpose and safe usage of manual and motorized winches for hanging and flying lights and scenery.
7. The purpose and safe usage of a wide variety of basic hand tools such as hammers, screw drivers, wrenches, manual saws, squares, levels, tape measures, etc.
8. The purpose of tools which would appear in a standard scene shop but are not acceptable for student use, such as circular saws, band saws, table saws, man-lifts, etc.

**Skills:**

Students will be able to:

1. Use the various pieces of equipment mentioned above to perform the basic construction activities required for the realization of a set.
2. Use the various pieces of equipment mentioned above to perform the basic functions necessary to operate a lighting board, sound board, or flying scenery during a theatrical production.

**Assessment Evidence**

**Direct Evidence:**

1. Students will demonstrate competence through practical testing as well as pencil and paper.
2. Students will maintain a documented chart of specific competencies, documenting the dates on which they were demonstrated.
3. Students will maintain a portfolio documenting experiences with the aforementioned tools.

**Learning Plan**

**Key Actions:**

**Ladders**

- Briefly discuss types of ladders.
- Discuss safety issues.
- Create several activities that require work from ladders of different sizes and types, e.g.,
  1. Move and erect “A” ladder safely from storage to stage for working purposes
  2. Move and erect step ladder safely from storage to stage for working purposes
  3. Climb “A” ladder and hang a small drop
  4. Climb “A” ladder and effect curtain track repair
  5. Climb step ladder and retrieve lighting instruments for lamp changing, cleaning, or inventory.
  6. Climb any ladder to paint or work.
  7. Although students are not permitted to use man-lifts, if lift is available, this would be an appropriate time to demo.

Time: 1-2 days
**Lighting Board**

- Lecture/discuss lighting system: dimmer rack, circuits, control board, and lighting instruments in position.
- Walk students from location to location so each student sees each of the above elements. Reiterate purpose. Demonstrate how each individual element plays a part in lighting.
- Demonstrate basics of lighting board and allow for individual, hands-on experience for each student.
- Although it should go without saying, safety rules should be reiterated as this process proceeds.

1. Begin at dimmer rack and demonstrate the use of circuit breakers. If dimmer rack is programmable, demo that as well.
2. Move to floor pockets. Have each student plug in a light or use a tester to demonstrate skill “plugging in.” Be sure students are aware of patching 1-1 or 1-2 (this will vary depending on the building/system you are using).
3. Move to circuits overhead on electrics and again test with tester or instrument.
4. Move to catwalk and repeat process.
5. Move to light booth and demonstrate basic functions of lighting board. Include dimming, blacking out, use of masters, sub-masters, “go” buttons, cross-faders, etc. This may also be a good time to demonstrate the writing of a basic cue. Be sure each student has opportunity for hands on experience with board. If possible, establish a mock cue sheet so student has opportunity to be in control of the board.

Time: 1-3 days

**Sound Board**

- Lecture/discuss purpose and methods for vocal amplification and sound effects and basic principles of sound.
- Discuss types and variety of equipment commonly found in theatres.
- Discuss specific equipment available in LCPS auditoriums.
- Provide students with practical experience plugging in cables, microphones, setting stands, adjusting volume, connecting auxiliary devices such as computers and ipods.
- Begin discussing safety issues involved with setting up and controlling sound.

1. Show students where various “hard” or “permanent” outlets for sound are located.
2. Have students plug microphone cables and microphones into system.
3. Have students speak into microphones.
4. Have students use whatever “wireless” microphones are available, be they hand held, lapel, or headsets. Discuss and point out “wireless” antennas.
5. Show students amplifiers and boosters. Turn on and off.
6. Discuss “channels” on sound board, how and to what they are connected. Demonstrate volume adjustments, as well as gain, bass, treble, etc.
7. Be sure each student receives hands-on training with both the board and the microphones.
If possible, create assignments in which students control a mock performance using both live and recorded sound.

**Time:** 1-3 days

**Power tools**

- Lecture/discuss purpose and methods for use of power tools.
- Demonstrate each.
- Begin discussing rules of safe usage for each tool.
- Have students use the tool to achieve a specific task, i.e. “measure, mark square, and cut this board 6’8” long.”

**Time:** 1-3 days

**Non-power tools**

- Select a variety of tools to use/demonstrate, including but not limited to hammer, screwdriver, wrench, etc.
- Do a quick identification/terminology lecture.
- Demonstrate correct safe and proper use of each tool. Mention unsafe or foolish uses for various tools, i.e. wrenches should not be used to drive nails.
- Create series of assignments requiring each student to use each tool.

**Time:** 1-3 days
**Goal:**

The student will understand the need for, and varieties of, scenery and other standard scenic elements when working on theatrical productions.

This goal addresses standards: T I.4, T I.11, T I.12, T I.13, T I.14, T I.15, T I.16, T II.1, T II.2, T II.6, T II.8, T II.15, T II.18, T III.1, T III.2, T III.7, T IV.13

**Understandings:**

1. There are many different types of scenic elements. Choosing the appropriate one for your production, your budget, and your time constraints is essential.
2. A general knowledge of the various conventional scenic elements (i.e. platforms, railings, stair units, ramps, trap doors, flats [hard and soft], wagons, drops, and curtains [travelers, legs, borders, cycloramas, and scrims]) should be understood before embarking on any technical theatre work.

**Essential Questions:**

1. How does scenery affect the interpretation or setting of a production?
2. In what ways do different stage levels contribute to a theatrical production?

**Knowledge:**

The student will know:

1. Basic platform construction—details of which can be found in the TSM
2. Adequate and appropriate railing construction (when necessary)—details of which can be found in the TSM
3. How to properly construct stair units (when necessary)—details of which can be found in the TSM
4. The restrictions for ramp placements (when necessary)—details of which can be found in the TSM
5. How to safely construct and operate trap doors (when necessary)—details of which can be found in the TSM
6. How to construct hard flats and soft flats (when necessary)—details of which can be found in the TSM
7. The applied differences between hard flats and soft flats and which is appropriate to use in which context
8. How to construct and operate wagons (when necessary)
9. How to hang and maintain drops and curtains properly
Skills:

The student will be able to safely and properly:

1. Construct basic platforms—details of which can be found in the TSM
2. Construct and attach adequate and appropriate railing (when necessary)—details of which can be found in the TSM
3. Properly construct stair units (when necessary)—details of which can be found in the TSM
4. Construct and integrate ramps (when necessary)—details of which can be found in use of power tools
5. Construct and operate trap doors (when necessary)—details of which can be found in the TSM
6. Construct hard flats and soft flats (when necessary)—details of which can be found in the TSM
7. Construct and operate wagons (when necessary)
8. Hang and maintain drops and curtains properly

Assessment Evidence

Direct Evidence

The student will:

1. Construct basic platforms in accordance with details found in the TSM
2. Construct and attach adequate and appropriate railing (when necessary) in accordance with details found in the TSM
3. Properly construct stair units (when necessary) in accordance with details found in the TSM
4. Construct and attach adequate and appropriate railing (when necessary) in accordance with details found in the TSM
5. Construct and integrate ramps (when necessary) in accordance with details found in the TSM
6. Construct and operate trap doors (when necessary) in accordance with details found in the TSM
7. Construct hard flats and soft flats (when necessary) in accordance with details found in the TSM
8. Construct and operate wagons (when necessary)
9. Hang and maintain drops and curtains properly
10. Pass a paper and pencil test designed to include scenic elements and stage craft
**Learning Plan**

**Key Actions:**

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## Technical Theatre

### Basic Lighting Execution

#### Goals:

1. Students will understand how various pieces of lighting equipment work
2. Students will develop the ability/skill to cable, hang, gel, focus, patch and control lights, as well as perform basic maintenance on the instruments.

These goals address standards TI.4, TI.11, TI.13, TII.1, TII.2, TII.6, TII.10, TII.18, TIII.1, TIII.2, TIII.7, TIII.9

#### Understandings:

1. The history of theatre lighting
2. The importance and impact of lighting on a theatrical production.
3. The basic elements/equipment necessary to successfully light a theatrical production.

#### Essential Questions:

1. Why is light important to a production?
2. How can light be used to enhance emotional elements of a production?

#### Knowledge:

Students will know:

1. How theaters were lighted during various historical periods
2. The basic types of lighting instruments used in modern theatre, their individual functions, and their capabilities.
3. How to cable, hang, gel, and focus a lighting instrument.
4. How to maintain and change lamps.
5. The importance of electrical loads.

#### Skills:

Students will be able to:

1. Hang, gel, cable, and focus a light.
2. Change a lamp.
3. Check the electrical load.
4. Turn the light on and off
5. Work as an “electrician” in the theatrical sense during the “hanging” of a show.
### Assessment Evidence

**Direct Evidence:**

1. Students will pass paper and pencil tests on the knowledge and skills of the unit
2. Students will give oral instructions to others on lighting procedures
3. Students will participate in the process of “hanging” a light plot.
4. Students will document basic skills on a “checklist” and in technical portfolios.

### Learning Plan

**Key Actions:**

1. Lecture/discuss/demo types of lighting instruments including spots and floods.
2. Discuss safety issues regarding the process of handling and hanging lighting instruments.
3. Lecture/discuss basic lighting design theory relative to angles, colors, and distance.
4. Provide hands on opportunities to cable, hang, gel, and focus lights from various areas in both lab and auditorium situations.
5. Lecture/discuss lighting history from early indoor theatres to the present, including discussions of various open flame and gas lights to modern electric lights.
6. Set up demo in lab to display the various types of lights, their capabilities, their impact at various angles, distances, and intensities, and using different colors.
7. Break down various instruments to component parts making sure students can identify basic elements such as lamp, lamp base, power cord, lenses, yoke, clamps, shutters, etc. Be sure to highlight differences between a spotlight and a floodlight.
8. Demonstrate correct procedure for safely hanging, gelling, and focusing an instrument.
9. Demonstrate correct procedure for connecting the instrument to a power source, emphasizing considerations of load.
10. Create a situation or variety of settings and have students demonstrate proficiency in cabling, hanging, gelling, and focusing an instrument by lighting the environment based on instructions from teacher. With students controlling light board, view the scenes created.
11. Have students participate in hanging plots and running lights for school productions, assemblies, etc.

**Time:** 2-5 days
# Technical Theatre

## Basic Sound Execution

### Goals:

1. Students will understand how various pieces of sound equipment work.
2. Students will develop the ability/skill to patch and control cable and various microphones, as well as perform basic maintenance and diagnostics on the equipment.

These goals address standards: T I.4, T I.11, T I.13, T II.1, T II.2, T II.6, T II.10, T II.18, T III.1, T III.2, T III.7, T III.9

### Understandings:

1. Some historic background on theatrical sound.
2. The importance and impact of sound on a theatrical production.
3. The basic elements/equipment necessary to successfully provide sound for a theatrical production.

### Essential Questions:

1. What specific sounds can you hear when you close your eyes and take notice?
2. Why is sound important to a production?
3. How can sound be used to enhance emotional elements of a production?

### Knowledge:

Students will know:

1. The evolution of sound in theatre over time.
2. The basic types of sound equipment used in modern theatre, their individual functions, and capabilities.
3. How to patch, secure, and control cable and microphones.
4. How to maintain and diagnose sound issues.

### Skills:

Students will be able to:

1. Choose appropriate cables to patch and control sound devices (microphones, iPods, CD players, computers).
2. Set levels for sound devices once connected.
3. Monitor sound devices (gain, volume, basic treble and bass, mute).
Assessment Evidence

Direct Evidence:

1. Students will pass paper and pencil tests on the knowledge and skills of the unit
2. Students will give oral instructions to others on sound board procedures
3. Students will participate in the process of running a sound setup.
4. Students will document basic skills on a “checklist” and in technical portfolios.

Learning Plan

Key Actions:

1. Lecture/discuss brief history of theatrical sound. Lecture/discuss/demo types of sound equipment, including microphones, stands, three-pin XLR cables.
2. Discuss safety issues regarding the process of handling and securing sound equipment.
3. Lecture/discuss basic sound design theory relative to hard-wired microphones (handheld, hanging, or floor mounted) and wireless microphones (handheld, lapel, over-the-ear).
4. Provide hands on opportunities to cable, place, and monitor sound from various areas in both lab and auditorium situations.
5. Lecture/discuss sound history from early theatres to the present, including discussions of the various elements of modern sound design (amplification, sound effects, underscore, soundtracks, pre- and post-show).
6. Set up demo in lab to display the various types of sound equipment, their capabilities, their impact at various distances, and sensitivities.
7. Break down various equipment to component parts, making sure students can identify basic elements such as sound board, microphone, cables (male ends, females ends, basic XLR cable [three-pin, four-pin, and five-pin], ¼” speaker [mono and stereo], ½” pin cable, etc. Be sure to highlight that cables can be terminated with many different combinations of these fittings.
8. Demonstrate correct procedure for safely installing, securing, and storing equipment.
9. Demonstrate correct procedure for connecting the equipment to a power source, emphasizing considerations of hot patching.
10. Create a situation or variety of settings and have students demonstrate proficiency in cabling, supplying microphones, and producing sound in the environment based on instructions from teacher. With students controlling sound board, view the situations created.
11. Have students participate in setting up and running sound for school productions, assemblies, etc.

Time: 2-5 days
## Technical Theatre

### Production Staff/Running Crew & Career Options

**Goals:**

Students will understand and be capable of performing the roles and responsibilities of various members of the production staff and running crews common to any theatrical production.

These goals address standards TI.4, TII.1, TII.2, TII.6, TIII.1, TIII.2, TIV.7

**Understandings:**

1. The roles and jobs available and necessary to a production.
2. How those roles can transfer into real world careers.

**Essential Questions:**

1. Who actually does all the work?
2. What skills are necessary for a career in technical theatre?

**Knowledge:**

Students will know:

1. There is a specific hierarchy and organization for completing technical work, both during the run-up to and during the performance of a theatrical production.
2. The names and job descriptions of personnel.
3. The possibilities for careers in technical theatre.

**Skills:**

Students will be able to:

1. Identify and/or describe the various technical positions.
2. Perform in a variety of said positions during various school productions.

### Assessment Evidence

**Direct Evidence:**

1. Students will pass paper and pencil tests on the knowledge and skills of the unit.
2. Students will perform in various technical roles and fulfill said responsibilities.
3. Students will document on a checklist all positions in which they have served throughout the course
4. Students will document experience in a technical theatre portfolio.

## Learning Plan

### Key Actions:

Lecture/discussion on Production Staff/Running crew to include but not be limited to the following:

**Running Crew**

1. Stage manager
2. Assistant Stage manager
3. Board operator – Lights
4. Board operator – Sound
5. Stage Crew, Grip(s)
6. SFX control
7. Props manager
8. Wardrobe master/mistress, dressers
9. Makeup master/mistress
10. Fly-man
11. House manager, assistant, usher

**Production Staff**

1. Technical director
2. Master carpenter, assistants
3. Master electrician, assistants
4. Sound master, electricians
5. Master painter, assistants
6. Costume mistress/master
7. Props master, assistants
8. Scenery, costume, light, sound, prop, special effects designers

Provide documentation from various theatrical programs and credits from professional productions.

1-2 days
| Technical Theatre |
| Stage Management and Production Time Tables |

**Goals:**

Students will come to understand that—

1. The duties and responsibilities of the stage manager are essential to the proper organization and running of any theatrical production.
2. Stage managers must be prepared to manage a production in the absence of a director.
3. An efficient stage manager is prepared for various types of leadership roles requiring valuable people skills that are applicable in many arenas.
4. Production Time Tables are the heartbeat and pulse of the production process.
5. An efficient stage manager is an invaluable assistant to the director throughout the entire production process, including pre-show preparation, audition, rehearsal and the run.

These goals address standards TII.5,

**Understandings:**

1. The stage manager is the key assistant to the director.
2. The primary duty of the stage manager is the creation of the promptbook.
3. The stage manager has essential production responsibilities that span the time from pre-casting to the end of the run.
4. The stage manager must work directly and collaboratively with all personnel involved in the production process, including actors and house/box office personnel.
5. The stage manager must create all production time tables and strive to maintain the integrity of each document.

**Essential Questions:**

1. What are the duties and responsibilities of a production stage manager?
2. What are the differences in responsibilities between a professional stage manager and an amateur one?
3. What terminology/vocabulary should a stage manager command?
4. Why should a production stage manager maintain an efficient company callboard?
5. What communication skills should a good stage manager possess?
6. How can the organization and responsibility of the stage manager impact the audition, rehearsal, and performance quality of any production?
7. Can a theatrical performance’s success be measured in terms of the efficiency and accurate execution of responsibilities of the stage manager?
Knowledge: Students will know:

1. Basic technical theatre terminology and when to use it.
2. The essential general responsibilities for stage managers.
3. How a stage manager assists other production personnel, including designers and technical directors.
4. How a stage manager maintains a proper production call board.
5. How to create and maintain the Company Roster.
6. How to create and maintain a production Prompt Book.
7. The various duties and responsibilities of the stage manager during a technical rehearsal.
8. How a stage manager calls a show.
9. How a stage manager maintains production standards during the run of a show.
10. How to direct a strike

Skills: Students will be able to:

1. Assemble cast and record attendance.
2. Give announcements and distribute information.
3. Give specific instructions required for the rehearsal period.
4. Create and maintain a check-in list for tech rehearsals and performances.
5. If needed, provide rehearsal props. These must be pulled in consultation with the designer and director of the production.
6. As needed, coordinate the sign-up or costume fittings between the costumer and the cast.
7. Help maintain quiet and order. Among other things, this means that all cell phones and other electronic devices must be kept away from backstage areas.
8. Call cues to begin the action: curtain, lights, sound.
9. Record blocking.
10. Record changes to the script.
11. Prompt actors as required.
12. Record running times.
13. Time and coordinate breaks for actors and staff.
14. Keep director informed of time allocation.
15. In a musical, help to coordinate activities between director, music director, choreographer, dance captain, and the cast in an effort to make the most efficient use of time.
16. Assist the director with notes.
17. Give announcements and take questions.
18. Remind cast about scheduled fittings and or changes to the schedule.
19. Prepare a daily log.
20. Check with the director habitually for changes and other notifications.
21. Leave the rehearsal space clean and neat.
22. Store all props so that they are secure and out of the way.
Assessment Evidence

Direct Evidence:

1. Students will pass paper and pencil tests on—
   - duties and responsibilities of the stage manager
   - creating, maintaining, and executing all time tables, including the coordination of all aspects of the production from construction to strike
   - theatre terminology (including acting and directing terms)
   - how to read and interpret (in 2D or 3D) a production floor plan
   - how to create various schedules and plots, i.e. contact sheet, costume plot, lighting cue sheet, sound cue sheet, prop list, and running order.
   - the use and function of stage communication devices and the proper etiquette and protocol associated with their use
   - the protocol and proper procedures engaged in load-in and strike of scenery, props, and costumes
2. Students will accept the role of a stage manager or assistant stage manager and execute the duties and responsibilities thoroughly
3. Students will submit a prompt book containing examples of all elements essential to a production
4. Students may be assigned to a production as stage manager or assistant. Evaluation of their execution of the duties and responsibilities may be an integral part of their portfolio review
5. Students may submit records, documentation (ex. program notes), and photographs of their work in the capacity of a stage manager.
6. Students may be given an opportunity to “train” other students in the execution of the duties and responsibilities of the stage manager

Learning Plan

Key Actions:

An Overview of Stage Management: Students will examine and discuss the basic duties and responsibilities of a production stage manager (and the assistant) as it pertains to amateur or secondary theatre. There must be detailed explanation and definition of technical vocabulary specific to stage management.

- The Stage Manager’s Prompt Book: Students will explore the various requisite elements of the production prompt book and submit either a mock replica or a promptbook from a current show.
- The Practical Application of Stage Management Skills: Students will learn the specific duties of a stage manager prior to auditions, in audition, for casting, prior, during, and after rehearsals, during tech rehearsals, run of show, and strike, and practice them in lab or in an actual production.
- Assessment and Portfolio Documentation: Stage Manager Review and journal or other written or visual documentation. The work of the stage manager may be submitted for portfolio review and evaluation.
**Technical Theatre**  
**Scale Drawing and Floor Plans**

**Goals:**

1. The student will understand the need for scale drawings and floor plans when working on theatrical productions and will develop an aptitude for creating these vital tools of basic communication.
2. The student will demonstrate comprehension of general scale drawing and floor plan creation for theatrical use and communication.

These goals address standards: T I.4, T I.11, T I.12, T I.13, T I.14, T I.15, T I.16, T II.2, T II.6, T II.8, T II.15, T II.18, T III.2, T III.7

**Understandings:**

1. Essential elements of scale drawing (e.g. different types of scales, how to use an architect’s ruler, straight edges, precise corners, standard increments of measurement).
2. Neatness and precision should be the guiding premise when embarking on any technical theatre work.
3. Floor plans are what is known as a “bird’s eye view” (looking down from above) of the desired area.
4. Floor plans are the basic tool by which theatrical professionals communicate with one another during rehearsal, the design process, and in performance.

**Essential Questions:**

1. Without an extensive narrative, how could you articulate with precision, using only paper and pencil, how you wanted your stage to be set up, furnished, and dressed?
2. What are the advantages of utilizing scale drawings?
3. Why and how is math important in theatrical design?

**Knowledge:**

The student will know:

1. that there are many different scales when it comes to creating drawings.
2. graph paper is a powerful tool and valuable shortcut when executing scale drawings.
3. how to manipulate an architect’s ruler and/or a standard classroom ruler.
4. basic and standard increments of a measurement (e.g. 1 inch, ½ inch, ¼ inch, ⅛ inch, 1/16 inch).
**Skills:**

The student will be able to:

1. take measurements of typical set pieces and stage furniture as seen from a bird's eye view (above)
2. designate an appropriate scale for the project
3. execute accurate and timely conversions from feet and inches to the desired scale
4. label items on drawing

**Assessment Evidence**

**Direct Evidence:**

The student will:

1. receive a scale (i.e. ½” = 1’) and a series of linear measurements and then reproduce the straight lines on paper and to scale which represent the measurements
2. receive a scale (i.e. ½” = 1’) and a series of geometric shapes of various sizes and then reproduce the shapes on paper and to scale which represent the shapes
3. produce scaled renderings in an accurate and timely fashion
4. designate 3-D furniture onstage on a 2-D piece of paper
5. take a student floor plan and tape or chalk-out an accurate and appropriate representation for rehearsal purposes
6. pass a paper and pencil test specifically designed for the unit

**Learning Plan**

**Key Actions:**

1. Secure enough paper (preferably ¼” graph paper) and pencils for everyone in the class. A compass would also be a helpful tool.
2. Choose and write ten different linear measurements (i.e. 3 feet, 6 ½ feet, 14 feet, etc.) on the board and have students reproduce those lines on their paper.
3. Choose and write the dimensions of ten different geometric shapes (i.e. a square with 4 foot sides, a rectangle with 8 foot sides and 4 foot sides, a circle with a 5 foot radius, a triangle with two 4 foot sides and an X side, etc.) on the board and have students reproduce those shapes on their paper.
4. Once they have floor plans, choose several and have students chalk or tape them out on the stage floor.
## Technical Theatre
### Paper Scale Model Set
### (Optional Unit)

**Goals:**

Students will come to understand that—

1. Scale models are effective visual elements as well as teaching tools in the study and execution of theatrical scene design.
2. Experience in creating scale models is applicable to other life skills other than scenic design.
3. Scale models are appropriate to a design portfolio.

These goals address standards T1.4, T1.1, T1.3, T1I.1, T1I.2, T1I.6, T1II.1, T1II.7, and T1IV.7

**Understandings:**

1. The same vocabulary and terminology used in scenery construction applies to scene models.
2. The principles of stage design and technology are often applicable in scale models.
3. A scale model scene design is a very accessible visual element useful in experiencing the vocabulary of critique as well as an incentive to read and analyze plays and demonstrate informed responses.
4. The scale model set is a practical means of combining the application of research, analysis, and artistic skills.

**Essential Questions:**

1. How is the scale model set used as a design communication tool in theatre?
2. What can theatre personnel learn from analyzing a scale model set design?
3. Can a person pursue a career in designing and constructing scale models?
4. At what point in the production process is the scale model most effectively used?
5. Is a scale model of the scenery designed for a production a necessary element in the design process?

**Knowledge:**

Students will know:

1. Basic technical theatre terminology and how it applies to scenery and scale model construction of scenery
2. That materials for constructing model scenery is not restricted to paper alone.
3. How a designer uses paper models to communicate ideas to a director and to other
design team personnel.
4. What scale (1/4 inch, ½ inch, etc.) is appropriate to the design and use.
5. The various handcraft skills needed to create a scale model set.
6. How to create and maintain a production Prompt Book.
7. How to develop a scale model set working from a ground plan.

**Skills:**

Students will be able to:

1. Select, read, and analyze a play for its scenic design needs.
2. Research styles and designs as appropriate to the play.
3. Discuss the concept and technical needs of the play from a directorial viewpoint and make design choices appropriately.
4. Read scale drawings (thumbnails) for the transference to set model building.
5. Demonstrate proficient use of standard measuring devices and architect rulers as they apply to scale model set construction.
6. Use scenery design and construction vocabulary.
7. Design scenery which incorporates all physical and aesthetic requirements described in the script or by the playwright/director/stage manager.
8. Construct a scale model set that includes floor plan and renderings (color or black and white), accompanied by a narrative, and a critique.

**Assessment Evidence**

**Direct Evidence:**

1. Students will pass a paper and pencil test to demonstrate knowledge of basic scene design vocabulary, measuring techniques, and basic scene design elements and the related terminology
2. Students must design scenic elements for a play by building a model.
3. Students must prepare the scale model set for public display and scrutiny, followed by critique from peers.
4. Students must identify resource materials used in their research of period styles and designs for set design.
5. Students must submit a written narrative describing their process and defending their design choices.
6. Students’ work will be critiqued according to an established criteria, which may include factors such as materials, scale, visual display, craftsmanship, analysis, detail, knowledge of playwright’s intent and directorial concept, thorough demonstration of knowledge and understanding of scenic elements, and substantial and durable construction.
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## Technical Theatre
### Basic Costuming
(Optional Unit)

### Goals:

Students will understand that—

1. The costume and its design are integral parts of the visual spectacle of a theatrical production.
2. Costume designers must work collaboratively with the production team, especially with lighting and scenic designers.
3. Costume choices regarding artistic elements (style, line, color, and texture), based on historic, factual, or creative research, enhance a director’s or the playwright’s production design concept.

These goals address standards T1.4, T1.1.1, T1.1.3, TII.1, TII.2, TII.6, TIII.1, TIII.7, and TIV.7

### Understandings:

1. The basic principles and elements of design also apply to costumes.
2. The ability to communicate concepts and character information is essential.
3. Costuming incorporates the functional as well as the artistic requirements of design.
4. Costuming might require a practical knowledge of assemblage/construction tools (sewing machines, needles, and other tools and supplies related to the craft).

### Essential Questions:

1. How do costumes and accessories enhance the visual spectacle of a production?
2. Must one know how to sew (create) costumes in order to design them?
3. Why must a costumer work collaboratively with the other members of the design team?
4. In what manner does costuming give meaning to the individual character and at the same time place each character in relationship to the total visual effect?

### Knowledge:

Students will know:

1. The basic principles and elements of design as they pertain to costuming.
2. The definition and use of technical vocabulary as it pertains to costuming.
3. The functions of costume design.
4. How to measure a body and fill out a costume measurement chart.
5. The essential duties and responsibilities of the costumer from casting to strike.
6. The responsibilities and duties of the costume design crew.
7. How to organize and maintain costumes and a costume wardrobe.
8. How to create and maintain a costume plot.
9. The various duties and responsibilities of the costumer during a technical or dress rehearsal.
10. How to recruit and train dressers and costume assistants during a production run.
11. How to render a costume design thumbnail.
12. The importance of basic design execution and technique.

Skills:

Students will be able to:

1. Use costumes to suggest season, time, and period.
2. Design appropriate costumes to convey the physical characteristics and psychological qualities of a character.
3. Select appropriate costumes and accessories for specific characterization.
4. Use costumes to illustrate cultural, historical, and economic differences.
5. Discuss the significance of silhouette in costume design.
6. Use costume vocabulary.
7. Create a costume plot.
8. Read plays in preparation for creative costume designs.

Assessment Evidence

Direct Evidence:

1. Students will pass paper and pencil tests to demonstrate knowledge of:
   - basic costume vocabulary
   - costume measurement techniques
   - basic sewing instruments, tools, and machinery used in costume construction
   - basic design elements of costume
   - the duties and responsibilities of costume personnel
2. Students may participate in a production as Costumer/Makeup Designer, assistant, or running crew.
3. Students will submit a rendering (thumbnail) of an appropriate costume for a play, with emphasis on design choices.
4. Students must attend, observe, and report on, either orally or written, technical rehearsals, with emphasis on costume choices.
5. Students must participate in a post mortem discussion, using formal criteria for costume, following each production.
6. Students must create and maintain a portfolio which incorporates experiences in costume research, design, and selection.
7. Students may identify resource materials used in research of period styles and designs for costumes.
## Learning Plan

**Key Actions:**

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