ORANGE SCHOOL DISTRICT

Stagecraft

CURRICULUM GUIDE – GRADES 9-12

APPROVED ON: _____ April 8, 2014 _____

ORANGE TOWNSHIP BOARD OF EDUCATION
Patricia A. Arthur
President
Arthur J. Griffa
Vice-President

Members

Lateefah Carr	Emily Jukes	Daniela Small-Bailey
Marion Graves-Jackson	Franklyn Ore	

SUPERINTENDENT OF SCHOOLS
Ronald C. Lee

ASSISTANT SUPERINTENDENT
Dr. Paula E. Howard

ADMINISTRATIVE ASSISTANT TO THE SUPERINTENDENT
Belinda Scott-Smiley
Operations/Human Resources

BUSINESS ADMINISTRATOR
Adekunle O. James
Akindele Ayodele

DIRECTORS
Kathryn P. Carter, *Language Arts/Testing*   Shelly Harper, *Special Services*
Candace Goldstein, *Special Programs*   Dr. Tina Powell, *Math/Science*
Dr. Terri Russo, *Curriculum & Instruction, PD & Assessment*

SUPERVISOR
Peter S. Crosta

Curriculum Writer
Maren B. Sugarman

TABLE OF CONTENTS

VISUAL & PERFORMING ARTS DEPARTMENT
STAGECRAFT: COURSE PHILOSOPHY/PURPOSE/VISION STATEMENT

Tell me and I will forget;
Show me and I may remember;
Involve me and I will understand.
-Confucius (450 BCE)

The arts are all about authentic performance, much more so than other academic areas.
-Jay McTighe (Teaching Theatre Journal, Summer 2012)

There's no business like show business.
-Irving Berlin ("Annie Get Your Gun" 1946)

Stagecraft, or the study of Technical Theatre, is the sole domain of Visual and Performing Arts learning that combines the fields of visual art, performance, technology, vocational training, industrial arts, design, business management, architecture, drafting, cultural history, and of course, theatrical arts. It is therefore, perhaps the most important arts course any institution of learning can offer. In an era when woodshops have been replaced by computer labs, it provides an effective bridge between knowing the difference between a crescent wrench and a socket wrench, and manipulating a computer generated building plan.

Current educational strategies are increasingly focused on "Project Based Learning", and assessments that require students to complete "Performance Tasks". It is most apropos that Stagecraft incorporates both of these educational strategies: scenery to be built and lighting and sound designs that must be executed in live performance. Stagecraft is also a collaborative practice, observing certain hierarchies and job descriptions that must work in concert with one another. Unlike a large chorus or concert band, where a mistake by a single singer or player might make the audience wince momentarily, mistakes made when a sound or lighting cue is missed, or when a prop or piece of furniture is out of place can often bring a live performance to a grinding halt, or result in dangerous, even injurious situations for performers and members of the audience. [Research the trials and tribulations of Broadway's "Spiderman, Turn Off the Dark."]

The beauty of Stagecraft is found in its innate quality of inter-disciplinary connection and real-world application. No matter what the area of study, the educator and student will find content strands that can be directly applied in a Stagecraft class. As much as possible (due to the fluid nature of current core curriculums on the national and state levels), this curriculum guide strives to provide references to Core Curriculum Content Standards for the Student Learning Objectives of this course. The reader will discover that almost every content area is represented.

Stagecraft is by definition, a CRAFT. Therefore, the learning must be executed and assessed using visible, audible, tangible, intellectual and even spiritual standards and artifacts. For the purpose of Theatre, as is the case will all Visual and Performing Arts, is to elicit deep emotional and intellectual connections between artists and each and every member of an audience. Upon the successful completion of Stagecraft, students will exit having gained skills, knowledge and enduring understandings that will benefit them for the rest of their lives, regardless of whether they pursue a career in theatre. Whether they are called on to express abstract ideas in a political forum, build bookshelves for a new home, paint walls for Habitat for Humanity, or get the lighting just right in a fussy baby's bedroom… Stagecraft will provide skills and knowledge that will continue to answer daily needs far into their futures.

STAGECRAFT

Course Description:

Stagecraft (grades 9-12)
Full Year (5 credits) – *Prerequisite: successful completion of General Drama and/or teacher referral*
The objective of this course is to introduce the student to the fundamental elements and principals of technical theatre through hands-on learning that makes use of the production facilities, operations, methods, and technologies used at the Orange Preparatory Academy Auditorium, and to relate these practices to those used in professional, amateur, and educational theaters. The course will include a brief history of theatrical stages and technology, and an overview of professional theatre and associated labor unions. Students will learn the functions of the creative team, production staff, technicians and stage crew. Basic elements of scenic construction, design concepts, theatrical lighting, sound technologies, and stage management will be introduced and assessed through practical application.
Participation in either the OPA or OHS Stage Crew is required for this course.

Course Units and Associated Topics:

The following is an overview of the units and associated topics covered in this course. It is important to note that due to the interrelatedness of all areas of Technical Theatre, certain topics may overlap or be introduced out of sequence and revisited for more in-depth study at different points during the course year.

Unit I: Introductions: Stage/Stagecraft/Auditorium
1. Theatre Safety - Fire Safety
2. Introduction to Orange Prep's Proscenium Stage
3. Introduction to Technical Theatre: What is Stagecraft?
4. Historical Overview – Evolution of the Stage from Epidaurus to Broadway
5. Types of Stages/Stage Geography

Unit II: Personnel and Operations
6. Theatre Hierarchy
7. Stage Crew Operations (Deck Protocol/Telex Communication/Rigging/Follow Spot)
8. Basics of Sound Amplification/OPA Sound System

Unit III: Scenic Elements and Set Construction
9. Scenic Elements: Flats, Platforms, Wagons, Stairs, Drops, etc.
10. Set Construction: Planning
11. Scenery Shop Safety
12. Set Construction: Practical Application
13. Elements of Scenic Art: Paints/Fabrics/Coverings

Unit IV: Design/Practical Applications for Lighting, Sets and Sound
14. Theatrical Lighting Basics
15. Introduction To Lighting Design
16. Basics of Set Design: Concepts/Research/Collaboration
17. Introduction To Sound Design
18. Sound System Operations: Practical Application

Unit V: Production Management/Careers
19. Production Stage Management
20. Theatrical Careers/Union Affiliations

Text Books/Resources:

Practical Technical Theatre, Interactive DVD Series, Interactive Educational Video LLC, 2013
Theatre Talk: An Illustrated Dictionary of Theatre Terms and Definitions, R. Anderson, Pioneer Drama Service
Stagecraft 1, Stagecraft Workbook 1, William H. Lord, Meriwether Publishing Ltd., Woodstock, IL, 2000

**ORANGE PREPARATORY ACADEMY/ORANGE HIGH SCHOOL
VISUAL AND PERFORMING ARTS CURRICULUM**

CONTENT AREA: THEATRE	COURSE: STAGECRAFT	GRADES: 9-12

The following objectives are provided to guide the instructor in the construction of daily lesson planning. The objectives below specify desired *behaviors* the instructor expects her/his students to display. Starting with these *Student Learning Objectives*, the instructor is free to specify *conditions* specific to her/his own teaching preferences to facilitate these behaviors. The further addition of required *criterion*, or the level of proficiency or mastery desired for the outcome, allows the instructor to transform these basic *SLO's* into "three-part" objectives currently required in district lesson planning.

This link provides a helpful guide to constructing effective three-part objectives:
http://www.nerc.com/files/Instructional_guide_writing_Objectives.pdf

UNIT and TOPIC	STUDENT LEARNING OBJECTIVES	Related NJCCCS or Model Curriculum Code (when applicable)
UNIT I: Introduction to Stage/Auditorium/ Stagecraft #1, Theatre Safety- Fire Safety	Identify and qualify all areas and equipment in the theatre that have the potential to cause significant harm leading to serious injury or fatality.	2.1.8.D.1
	Identify and analyze safety precautions present in the theatre.	5.1.12.C.2
	Research, compare and contrast the history of famous theatre fires, synthesizing the resulting fire codes of the present day.	NSAE T.5.9-12* *National Standards for Arts Education
	Understand and/or demonstrate proper usage of the fire curtain, fire extinguishers and emergency procedures of OPA Auditorium.	
#2 Intro to OPA's Proscenium Stage	Identify and define all aspects and components of Orange Preparatory Academy's proscenium stage.	
	Explore, label and define usage of all areas adjacent to the stage within the auditorium complex: basement scenery storage area; dimmer room; costume/fabric storage; second level galleries; top grid; house; lobby; balcony; sound/lighting booth.	
	Recognize and explain usage of terminology to define the space: theat<u>re</u>; theat<u>er</u>; auditorium.	CCSS L.9-10.6 CCSS L.11-12.6

#3 Introduction to Technical Theatre: What is Stagecraft?	Ascertain the aesthetic impact that the level of technical proficiency has on a play and production, taking such contextual factors into account as the performance space, performance intent, scale of production, budget, etc.	1.4.12.B.3
#3 Introduction to Technical Theatre: What is Stagecraft? (cont'd.)	Examine applications of recent forms of technology in theatrical work. Determine the impact of technology on the way audiences perceive multimedia/theatrical art forms and how it impacted consumers, creators, and performers worldwide.	1.4.12.B.3
	Identify, define and compare components and disciplines of theatrical technologies.	NSAE T.3.9-12
	Trace the developments of the technical aspects of Western Theatre since its inception.	1.4.12.B.3
#4 Historical Overview- Evolution of the Stage	Compare and contrast stages of Ancient Greece, the Roman Empire, 1st century Japan, Medieval Europe, Elizabethan England, French/Italian Restoration; and contemporary eras.	1.4.12.A.3 6.2.12.D.4.k
	Explore and evaluate the impact of historical cultural and societal trends on performance venues of different time periods.	1.4.12.A.4 CCSS W.9-10.2a-f CCSS W.11-12.2a-f
#5 Types of Stages/ Stage Geography	Identify and define the properties of different theatrical performance spaces: proscenium stage; Amphitheatre; thrust (3/4) stage; arena stage (theatre-in-the-round); black box space.	NSAE T.3.9-12
	Hypothesize and express appropriate uses of different stages in relations to specific theatrical genres, traditions and aesthetics.	CCSS SL.9-10.4 CCSS LS.11-12.4
UNIT II: Personnel and Operations #6 Theatre Hierarchy	Define the areas of responsibility (e.g., actor, director, producer, scenic, lighting, costume, stagehand, etc.) and necessary job skills of the front and back-of-house members of a theatre company.	1.1.8.C.4
	Distinguish skill set required for theatrical creative and technical team positions and determine personal suitability for one or more specific job titles.	9.3.12.C.5
#7 Stage Crew Operations	Demonstrate and practice knowledge and abilities necessary to perform basic OPA/OHS Stage Crew functions: Telex operations; protocols for responding to directions from Production Stage Manager; microphone management; curtain management; backstage etiquette; "spiking"; follow spot operation; projection screen implementation.	NSAE T.3.9-12
	Demonstrate and practice proper handling, use, maintenance of XLR, lighting and electrical cables.	
	Memorize, justify, recall and demonstrate proper and SAFE procedures for operation of the OPA stage counter-weight rigging system: Glove, Grab, Spot, Shout, Spot, Un-loop, Unlock, Pull, Lock and Loop	
	Create and implement hypothetical performance conditions.	CCSS SL.9-10.2 CCSS SL.11-12.2

#8 Basics of Sound Amplification-OPA Sound System Operation	Identify and explain uses of the various microphones used in the OPA Auditorium and demonstrate procedures for connecting them into the sound system.	NSAE T.3.9-12
	Hypothesize, implement and justify various microphone/amplification set-ups for different events: concert; play; meeting; assembly; etc.	
UNIT III: Scenic Elements and Set Construction	Observe and classify basic terminology and categories of theatrical scenic design: unit sets; box sets; curtain/drop sets; realistic; abstract; etc.	1.3.8.D.1
#9 Scenic Elements	Recognize, label and compare elements commonly found in scenic designs: cubes; flats; triangles (periaktoi); stationary platform units; mobile platform units (eccyclema); drops; stair units; flown components; set properties/props; hand properties/props; set decoration.	NSAE T.3.9-12
#10 Set Construction: Planning	Analyze, differentiate and interpret floor plans, elevations and renderings of sample set designs.	
	Prepare a hand drawn floor plan (to scale) of the stage with given pre-set scenic elements/requirements.	CCSS 7.RP.A.2
	Create and render an original floor plan and translate it to the stage floor (*spike* the plan).	
#11 Scenery Shop Safety	Memorize, recall and demonstrate basic safety procedures for the proper and safe maintenance and storage of items used during set construction.	1.1.12.C.3 5.1.8.D.3
	Express and justify reasoning behind safety procedures regarding work area, personal space and collaborative space.	2.1.8.D.1
#12 Set Construction: Practical	Identify, recall and demonstrate operational knowledge, application and proper use of tools used for measuring and marking of materials.	
	Identify, recall and demonstrate operational knowledge, application and proper use of hand tools used for cutting and joining of materials.	
	Identify and describe types and associated purposes of lumber used for set construction.	
	Describe and exhibit knowledge of safe and proper handling for selected power tools: drivers; jig-saw; table saw.	2.1.8.D.1
	Identify and describe types and associated purposes of soft goods and fabrics used for set construction.	
	Describe and differentiate the nature of flame retardant (FR) and inherently flame retardant (IFR) materials.	2.1.8.D.1
	Demonstrate and apply proper usage of all construction tools.	2.1.8.D.1
	Construct a flat (full size or scaled down), rehearsal cube or other unit of scenery.	

	Observe and relate best practice protocols and safety guidelines for *Strike/Striking the Set*.	5.1.8.D.3
#13 Elements of Scenic Art	Identify and compare scenic painting techniques: dry-brushing; splattering; distressing; sponge techniques; etc.	1.3.8.D.6
	Apply and incorporate scenic painting/decoration techniques in the creation of scenery.	1.1.12.C.3
UNIT IV: Design/Practical Applications for Lighting, Set and Sound	Identify and recall names of lighting instruments in the OPA Auditorium: ellipsoidal reflector (Lekolite); Fresnel; par can; boarder lights; scoops; cyclorama lights; follow spot.	
#14 Theatrical Lighting Basics	Summarize and contrast common usages of specific lighting instruments and lighting accessories.	NSAE T.3. 9-12
	Demonstrate proper procedures for the hanging and focusing of lighting instruments.	
	Observe and apply basic knowledge of OPA light board operation: on/off; master dimmers; sub-master presets.	NSAE T.3.9-12
#15 Intro to Lighting Design	Recognize and practice precepts of text analysis in relation to the creation and execution of lighting design.	1.4.8.A.1 RL.9.2
	Express and utilize the importance of image research in the creation and execution of theatrical lighting design.	NSAE T.5 CCSS W.9.9a
	Hypothesize and inventory components necessary for the execution of lighting requirements for a given text.	1.3.8.D.6
	Create and execute an original lighting look based on simulated text/directorial requirements.	8.2.8.B.1
	Observe and discuss recorded interview(s) with professional, theatrical lighting designer(s).	
#16 Basics of Set Design	Recall and compare text analysis and research strategies for lighting design and apply them to theatrical scenic design.	1.3.12.C.1 NSAE T.5
	Develop and execute set design for a scene for a hypothetical or real production incorporating at least one, seamless setting transition (scene change).	5.1.12.A.2
	Construct a three-dimensional model to represent and original set design.	CCSS HS.G.MG.A.3
	Observe and discuss recorded interview(s) with professional, theatrical set designer(s).	
#17 Intro to Sound Design	Recall, compare and contrast text analysis and research strategies for set and lighting design and apply them to theatrical sound design.	1.3.12.C.1 NSAE T.5
	Assess and inventory components necessary to execute sound design for two different styles of stage events.	8.2.8.B.1
	Compose and produce a narrative using music excerpts and sound effects with only minimal (or no) recorded text.	1.3.12.C.1 CCSS W.9.6

	Observe and discuss recorded interview(s) with professional, theatrical sound designer(s).	
#18 Sound System Operations: Practical Application	Recall and restate types of microphones and their associated uses: dynamic/cardioid vocal (wired and wireless); condenser/cardioid; boundary; lavaliere.	CCSS SL.9.4
#18 Sound System Operations: Practical Application (cont'd.)	Observe and apply <u>basic</u> knowledge of OPA sound board operation: on/off; frequently used channels; frequently used subs; frequently used components	
UNIT V: Production Management/Careers	Define and summarize the necessary skill set and duties required of a theatrical production stage manager.	9.3.12.C.2
#19 Production Stage Management	Organize and prepare comprehensive prompt book (production script) excerpt with detailed cue sheet. (Can be based on designs executed during earlier units.)	
	Prepare (written), perform and self-assess a simulation of a production stage manager at work in one of the following situations: calling a portion of a show; running a "brush up" rehearsal; conference with actor in violation of union procedures.	NSAE.T.3.9-12 2.2.12.A.2
	Participate and improvise with classmates in PSM simulations and provide verbal feedback and written critique.	CCSS SL.9.1.D
	Observe and discuss recorded interview(s) with professional, production stage manager(s).	
#20 Theatrical Careers/Union Affiliations	Research and discuss careers in technical theatre.	
	Assess personal skill set/knowledge and hypothesize an appropriate job position with regards to technical theatre, production team or creative team.	
	Identify and summarize the roles of Actors Equity Association (AEA), International Alliance of Theatrical Stage Employees (IATSE), Stage Directors and Choreographers Society (SDC) and United Scenic Artists Local USA 829 (USA829).	9.1.8.A.3
	Propose and research an educational pathway to working in a targeted discipline related to technical theatre.	9.3.12.C.2

ASSOCIATED CURRICULUM CONTENT STANDARDS
FOR STAGECRAFT
[NJ Department of Education Core Curriculum Content Standards/Common Core State Standards Initiative]

CONTENT AREA	VISUAL AND PERFORMING ARTS (NJCCCS 2009)	
STANDARD	**1.1 The Creative Process: All students will demonstrate an understanding of the elements and principles that govern the creation of works of art in dance, music, theatre, and visual art.**	
STRAND	**C: Theatre**	
CPI #		CONTENT
1.1.12.C.3: Apply the basic physical and chemical properties (e.g., light, electricity, color, paint, scenic construction, costumes, makeup, and audio components) inherent in technical theatre to safely implement theatre design.		Theatre production is an art, but it is also a science requiring knowledge of safety procedures, materials, technology, and construction techniques.
1.1.8.C.4: Define the areas of responsibility (e.g., actor, director, producer, scenic, lighting, costume, stagehand, etc.) and necessary job skills of the front and back-of-house members of a theatre company.		A team of artists, technicians, and managers who collaborate to achieve a common goal uses a broad range of skills to create theatrical performances.
STANDARD	**1.2 History of the Arts and Culture: All students will understand the role, development, and influence of the arts throughout history and across cultures.**	
STRAND	**A: History of Arts and Culture**	
CPI #		CONTENT
1.2.12.A.2: Justify the impact of innovations in the arts (e.g., the availability of music online) on societal norms and habits of mind in various historical eras.		Access to the arts has a positive influence on the quality of an individual's lifelong learning, personal expression, and contributions to community and global citizenship.
STANDARD	**1.3 Performance All students will synthesize those skills, media, methods, and technologies appropriate to creating, performing, and/or presenting works of art in dance, music, theatre, and visual art.**	
STRAND	**C: Theatre**	
CPI #		CONTENT
1.3.12.C.1: Create plays that include well-structured plots and subplots, clear thematic intent, original characters, and technical theatrical elements appropriate to a variety of theatrical genres.		Effective scripted and improvisational performances require informed, supported, and sustained choices by actors, directors, and designers. Theatre genres are created by combining complex narrative structures, technical theatrical elements, and thematic intent.
STRAND	**C: Visual Art**	

CPI #	CONTENT
1.3.8.D.1: Incorporate various art elements and the principles of balance, harmony, unity, emphasis, proportion, and rhythm/movement in the creation of two- and three- dimensional artworks, using a broad array of art media and art mediums to enhance the expression of creative ideas (e.g., perspective, implied space, illusionary depth, value, and pattern).	The creation of art is driven by the principles of balance, harmony, unity, emphasis, proportion, and rhythm/movement.
1.3.8.D.6: Synthesize the physical properties, processes, and techniques for visual communication in multiple art media (including digital media), and apply this knowledge to the creation of original artworks.	The visual possibilities and inherent qualities of traditional and contemporary art materials (including digital media) may inform choices about visual communication and art-making techniques.

STANDARD	1. 4 Aesthetic Responses & Critique Methodologies All students will demonstrate and apply an understanding of arts philosophies, judgment, and analysis to works of art in dance, music, theatre, and visual art.
STRAND	A. Aesthetic Responses

CPI #	CONTENT
1.4.8.A.1: Generate observational and emotional responses to diverse culturally and historically specific works of dance, music, theatre, and visual art	Contextual clues to artistic intent are embedded in artworks. Analysis of archetypal or consummate works of art requires knowledge and understanding of culturally specific art within historical contexts.
1.4.12.A.3: Develop informed personal responses to an assortment of artworks across the four arts disciplines (dance, music, theatre, and visual art), using historical significance, craftsmanship, cultural context, and originality as criteria for assigning value to the works.	Artistic styles, trends, movements, and historical responses to various genres of art evolve over time.
1.4.12.A.4: Evaluate how exposure to various cultures influences individual, emotional, intellectual, and kinesthetic responses to artwork.	Criteria for assessing the historical significance, craftsmanship, cultural context, and originality of art are often expressed in qualitative, discipline-specific arts terminology.

STRAND	B. Critique

CPI #	CONTENT
1.4.12.B.3: Determine the role of art and art-making in a global society by analyzing the influence of technology on the visual, performing, and multimedia arts for consumers, creators, and performers around the world.	Art and art-making reflect and affect the role of technology in a global society.

CONTENT AREA	HEALTH AND PHYSICAL EDUCATION (NJCCCS 2009)
STANDARD	2.1 Wellness All students will acquire health promotion concepts and skills to support a healthy, active lifestyle.
STRAND	D. Safety

CPI #		CONTENT
2.1.8.D.1: Assess the degree of risk in a variety of situations and identify strategies to reduce intentional and unintentional injuries to self and others.		Evaluating the potential for injury prior to engaging in unhealthy/risky behaviors impacts choices.
STANDARD	**2.2 Integrated Skills All students will develop and use personal and interpersonal skills to support a healthy, active lifestyle.**	
STRAND	**A. Interpersonal Communication**	
CPI #		CONTENT
2.2.12.A.2: Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts.		Effective communication is the basis for strengthening interpersonal interactions and relationships and resolving conflicts.
CONTENT AREA	**ENGLISH LANGUAGE ARTS (Common Core State Standards/NJ Model Curriculum, 2012)**	
DOMAIN	**Reading: Literature**	
CCSS #		CONTENT
Literacy.RL.9.2		Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
DOMAIN	**Writing**	
CCSS #		CONTENT
Literacy.W.9.4		Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
Literacy.W.9.9a		Apply grades *9–10 Reading standards* to literature (e.g., "Analyze how an author draws on and transforms source material in a specific work [e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare]")
DOMAIN	**Speaking and Listening**	
CCSS #		CONTENT
Literacy.SL.9.4		Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.
CONTENT AREA	**MATHEMATICS (Common Core State Standards/NJ Model Curriculum, 2012)**	
DOMAIN	**Ratios & Proportional Relationships**	
CCSS #		CONTENT
Math.7.RP.A.2		Recognize and represent proportional relationships between quantities.
DOMAIN	**High School Geometry: Modeling with Geometry**	
CCSS #		CONTENT

HS.G.MG.A.3	Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).
CONTENT AREA	**SCIENCE (NJCCCS 2009)**
STANDARD	**5.1 Science Practices All students will understand that science is both a body of knowledge and an evidence-based, model-building enterprise that continually extends, refines, and revises knowledge. The four Science Practices strands encompass the knowledge and reasoning skills that students must acquire to be proficient in science.**
STRAND	**A. Understand Scientific Explanations: Students understand core concepts and principles of science and use measurement and observation tools to assist in categorizing, representing, and interpreting the natural and designed world.**

CPI #	CONTENT
5.1.12.A.2: Develop and use mathematical, physical, and computational tools to build evidence-based models and to pose theories.	Interpretation and manipulation of evidence-based models are used to build and critique arguments/explanations.

STRAND	**C. Reflect on Scientific Knowledge: Scientific knowledge builds on itself over time.**

CPI #	CONTENT
5.1.12.C.2: Use data representations and new models to revise predictions and explanations.	Data and refined models are used to revise predictions and explanations.

STRAND	**D. Participate Productively in Science: The growth of scientific knowledge involves critique and communication, which are social practices that are governed by a core set of values and norms.**

CPI #	CONTENT
5.1.8.D.3: Demonstrate how to safely use tools, instruments, and supplies.	Instruments of measurement can be used to safely gather accurate information for making scientific comparisons of objects and events.

CONTENT AREA	**SOCIAL STUDIES (NJCCCS 2009)**
STANDARD	**6.2 All students will acquire the knowledge and skills to think analytically and systematically about how past interactions of people, cultures, and the environment affect issues across time and cultures. Such knowledge and skills enable students to make informed decisions as socially and ethically responsible world citizens in the 21st century.**
ERA	**A Half-Century of Crisis and Achievement (1900-1945)**
STRAND	**D. History, Culture, and Perspectives**

CPI #	CONTENT
6.2.12.D.4.k: Analyze how the arts represent the changing values and ideals of society.	Compare present and past events to evaluate the consequences of past decisions and to apply lessons learned.

CONTENT AREA	**TECHNOLOGY (NJCCCS 2009)**

STANDARD	8.2 Technology Education, Engineering, and Design: All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment.	
STRAND	B. Design: Critical Thinking, Problem Solving, and Decision-Making	
CPI #		CONTENT
8.2.8.B.1: Design and create a product [*functional theatrical design*] that addresses a real-world problem using the design process and working with specific criteria and constraints.		The design process is a systematic approach to solving problems.
CONTENT AREA	21st Century Life and Careers (NJCCCS 2009)	
STANDARD	9.1 21st-Century Life & Career Skills All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.	
STRAND	A. Critical Thinking and Problem Solving	
CPI #		CONTENT
9.1.12.A.1: Apply critical thinking and problem-solving strategies during structured learning experiences.		The ability to recognize a problem and apply critical thinking and problem-solving skills to solve the problem is a lifelong skill that develops over time.
9.1.8.A.3: Summarize strategies used by various organizations and agencies to solve problems that impact communities, and compare them with strategies used by similar organizations in another state or country.		The ability to recognize a problem and apply critical thinking and problem-solving skills to solve the problem is a lifelong skill that develops over time.
STANDARD	9.3 Career Awareness, Exploration, and Preparation All students will apply knowledge about and engage in the process of career awareness, exploration, and preparation in order to navigate the globally competitive work environment of the information age.	
STRAND	C. Career Preparation	
CPI #		CONTENT
9.3.12.C.2: Characterize education and skills needed to achieve career goals, and take steps to prepare for postsecondary options, including making course selections, preparing for and taking assessments, and participating in extra-curricular activities.		Career preparation requires purposeful planning based on research, self-knowledge, and informed choices.
9.3.12.C.3: Develop personal interests and activities that support declared career goals and plans.		Career preparation requires purposeful planning based on research, self-knowledge, and informed choices.
9.3.12.C.5: Identify transferable skills in career choices and design alternative career plans based on those skills.		Career preparation requires purposeful planning based on research, self-knowledge, and informed choices.

NATIONAL STANDARDS FOR ARTS EDUCATION (NSAE) [National Association for Music Education (Sponsor)/The Kennedy Center, ArtsEdge (Distributor)]	
CONTENT AREA	**THEATRE, grades 9-12**
STRAND	**3. DESIGN:** Designing and producing by conceptualizing and realizing artistic interpretations for informal or formal productions.
Achievement Standard: Proficient	**Achievement Standard: Advanced**
Students explain the basic physical and chemical properties of the technical aspects of theatre (such as light, color, electricity, paint, and makeup)	Students explain how scientific and technological advances have impacted set, light, sound, and costume design and implementation for theatre, film, television, and electronic media productions
Students analyze a variety of dramatic texts from cultural and historical perspectives to determine production requirements	Students collaborate with directors to develop unified production concepts that convey the metaphorical nature of the drama for informal and formal theatre, film, television, or electronic media productions
Students develop designs that use visual and aural elements to convey environments that clearly support the text	Students safely construct and efficiently operate technical aspects of theatre, film, television, or electronic media productions
Students apply technical knowledge and skills to collaboratively and safely create functional scenery, properties, lighting, sound, costumes, and makeup	Students create and reliably implement production schedules, stage management plans, promotional ideas, and business and front of house procedures for informal and formal theatre, film, television, or electronic media productions
Students design coherent stage management, promotional, and business plans	
STRAND	**5. HISTORY CULTURE:** Researching by evaluating and synthesizing cultural and historical information to support artistic choices.
Achievement Standard: Proficient	**Achievement Standard: Advanced**
Students identify and research cultural, historical, and symbolic clues in dramatic texts, and evaluate the validity and practicality of the information to assist in making artistic choices for informal and formal productions	Students research and describe appropriate historical production designs, techniques, and performances from various cultures to assist in making artistic choices for informal and formal theatre, film, television, or electronic media productions

ORANGE PREPARATORY ACADEMY/ORANGE HIGH SCHOOL
STAGECRAFT, GRADES 9-12
CURRICULUM BLUEPRINT/ LESSON GUIDES

COURSE: STAGECRAFT	GRADES 9-12
UNIT I: Introductions: Stage/Stagecraft/Auditorium	**TOPIC #1:** Theatre Safety - Fire Safety (part 1)

CONTENT:
- Theatres, as public gathering spaces, are strictly regulated by state and local fire safety and capacity regulations.
- Theatres disasters throughout history have resulted in the continuing process of fire and safety regulations.
- Technical staff in the theatre is responsible for maintaining a safe environment and complying with all fire and safety regulations.

STUDENT LEARNING OBJECTIVES:
- Identify and qualify all areas and equipment in the theatre that have the potential to cause significant harm leading to serious injury or fatality.
- Identify and analyze safety precautions present in the theatre.

Essential Question(s) (General):	**Essential Question(s) (Topic Specific):**
• To what extent can we keep ourselves safe and injury free? • What rules are general and what rules are situation specific?	• How many ways can a theatre kill or seriously injure you? • Why do we have rules regulating safety in the OPA Auditorium?

Suggested Activities:	**Resources:**
• Prompted observation/writing – First Journal Entries • Obstacle course: Instructor sets up various obstacles on stage, including lowered electrics, closed curtains, cables, cubes, etc. Students verbally guide blindfolded classmates successfully on various pathways around the stage. • Hands-on: counter-weights; clearing clutter (striking the obstacle course) • Reading: "fine print" Auditorium Use Form-find safety issues • Scavenger Hunt: Collaborative groups hunt for items • Preliminary stage/house tour	Access to OPA Auditorium Facilities http://www.hstech.org/ Rigging: http://www.edta.org/education/making/inspector-calls

Assessment:	**Interdisciplinary Connections:**
Accurate verbal expression/written response Group cooperation Self/group assessment	ELA: Journal Health & Safety Architecture: Classic Greek Style Civics: Laws governing public gathering spaces

COURSE: STAGECRAFT	GRADES 9-12
UNIT I: Introductions: Stage/Stagecraft/Auditorium	**TOPIC #1:** Theatre Safety - Fire Safety (part 2)

CONTENT:
• Theatres, as public gathering spaces, are strictly regulated by state and local fire safety and capacity regulations.
• Theatre disasters throughout history have resulted in the continuing process of fire and safety regulations.
• Technical staff in the theatre is responsible for maintaining a safe environment and complying with all fire and safety regulations.

STUDENT LEARNING OBJECTIVES:
• Research, compare and contrast the history of famous theatre fires, synthesizing the resulting fire codes of the present day
• Identify and analyze safety precautions present in the theatre.
• Understand and/or demonstrate proper usage of the fire curtain, fire extinguishers and emergency procedures of OPA Auditorium.

Essential Question(s) (General):	**Essential Question(s) (Topic Specific)**:
• What is the significance of the phrase "Those who do not learn from history are doomed to repeat it"? (Winston Churchill)	• Why are they so many laws, rules and regulations regarding fire safety in theatres? • What are the fire safety rules and response protocols in the OPA Auditorium?

Suggested Activities:	**Resources:**
• Review scavenger hunt from previous lesson – target safety precautions related to fire safety. • HW/follow up discussion/share: theatre fire web image search. • Instruction and practice fire curtain deployment/retraction • Instruction and demo fire extinguisher use (PASS: pull pin; aim; squeeze; spray)	Access to OPA Auditorium Facilities http://www.hstech.org/
Assessment:	**Interdisciplinary Connections:**
Successful demonstration of learned skills Discussion cooperation Homework completion Self/group assessment	ELA: Journal Health & Safety Civics: Fire regulations History: Research early theatre disasters

COURSE: STAGECRAFT	**GRADES 9-12**
UNIT I: Introductions: Stage/Stagecraft/Auditorium	**TOPIC #2:** Intro to OPA's Proscenium Stage

CONTENT:
• The Orange Preparatory Academy Auditorium is a precious district resource that serves the needs of the Board of Education, Orange High School, Orange Preparatory Academy, and the City of Orange Township.
• Overview of OPA Auditorium facility and associated theatre vocabulary

STUDENT LEARNING OBJECTIVES:
• Identify and define all aspects and components of Orange Preparatory Academy's proscenium stage
• Explore, label and define usage of all areas adjacent to the stage within the auditorium complex: basement scenery storage area; dimmer room; costume/fabric storage; second level galleries; top grid; house; lobby; balcony; sound/lighting booth.
• Recognize and explain usage of terminology to define the space: theatre; theater; auditorium.

Essential Question(s) (General):	**Essential Question(s) (Topic Specific)**:
• "What's in a name? That which we call a rose, by any other name, would smell as sweet…" Shakespeare	• Why are so many of the terms we use to describe a stage the same as terms used to describe ships? • What is the difference between an auditorium, a theatre and a theater?

Suggested Activities:	**Resources:**
• Full tour of the auditorium and adjoining spaces. • *Practical Technical Theatre DVD Series* (*PTT*) - Program 1, Days 5 & 6 • Completion of *Intro to Proscenium Stage* worksheets. • Collaborative Group Definition Search for words: auditorium; theatre; theater. Groups present findings to class.	Access to OPA Auditorium Facilities http://www.hstech.org/ *Practical Technical Theatre DVD Series,* Program 1

Assessment:	**Interdisciplinary Connections:**
Completion of Worksheets Group cooperation/presentations Self/group assessment	ELA: Vocabulary/Oral presentation History: Nautical legacies Health & Safety

COURSE: STAGECRAFT	**GRADES 9-12**
UNIT I: Introductions: Stage/Stagecraft/Auditorium	**TOPIC #3:** Introduction to Technical Theatre: What is Stagecraft? (part 1)

CONTENT:
• Theatre production is an art, but it is also a science requiring knowledge of safety procedures, materials, technology, and construction techniques.
• Art and art-making reflect and affect the role of technology in a global society.
• Advances in technology effect and impact the arts and art-making and, in turn, impact the society/audience.

STUDENT LEARNING OBJECTIVES:
• Ascertain the aesthetic impact that the level of technical proficiency has on a play and production, taking such contextual factors into account as the performance space, performance intent, scale of production, budget, etc.
• Examine applications of recent forms of technology in theatrical work. Determine the impact of technology on the way audiences perceive multimedia/theatrical art forms and how it impacted consumers, creators, and performers worldwide.

Essential Question(s) (General):	**Essential Question(s) (Topic Specific)**:
• What is the difference between a "passive" and an "active" member of an audience? • How is observation impacted by knowledge? • How do technological advances impact the arts?	• What is Stagecraft? • Is Technical Theatre "art" or "technology"?

Suggested Activities:	**Resources:**
• *PTT*, DVD Program 1, Introduction • Audience Participation Exercise: [*Sample: Instructor presents short recitation/performance/song. Instructor or student leader then "warms-up" the crowd with clapping/stomping/chanting/etc. Instructor repeats presentation. Discuss differences in levels of engagement. Record reactions in journal.*] • Observation/Video Clips: Broadway; regional theatre; OPA/OHS productions; Shakesperience; street performances, outdoor festivals with and without tech • Written/verbal response to viewing with focus on impact of lights, sound sets, costumes, etc.	Access to OPA Auditorium Facilities http://www.hstech.org/ *Practical Technical Theatre DVD Series*, Program 1 You tube (download) Outdoor Stage Combat at Chesapeake Shakespeare Company Video Clips: Broadway.com/Orangearts.net
Assessment: Thoughtful verbal expression/written response Group cooperation Self/group assessment	**Interdisciplinary Connections:** ELA: Journal Speaking/Listening: Oral expression/Auditory cognition Science: Impact of technological advances

COURSE: STAGECRAFT	**GRADES 9-12**
UNIT I: Introductions: Stage/Stagecraft/Auditorium	**TOPIC #3:** Introduction to Technical Theatre: What is Stagecraft? (part 2)

CONTENT:
• Theatre production is an art, but it is also a science requiring knowledge of safety procedures, materials, technology, and construction techniques.
• Art and art-making reflect and affect the role of technology in a global society.
• Advances in technology effect and impact the arts and art-making and, in turn, impact the society/audience.

STUDENT LEARNING OBJECTIVES:
• Identify, define and compare components and disciplines of theatrical technologies.
• Trace the developments of the technical aspects of Western Theatre since its inception.

Essential Question(s) (General):	**Essential Question(s) (Topic Specific)**:
• What meaning is inferred by the quote, "The whole is greater than the sum of its parts" (Aristotle)? • Do we need technology to live?	• What are the technical components that go in to the creation of a live, theatrical performance? • How does technology impact live performance?

Suggested Activities:	Resources:
• HW: Home inventory "technology". Classify re: necessary for survival. • Human Evolution Thought Experiment: Students required to use imagination to transport themselves into the mindset of early/ancient/medival/renaissance/American Colonial/Early 20th century experiences (use memories of film, TV, etc.) • Show & Tell & Justify Technology (HW) • Revisit observation records of previous viewing: identify theatre technology. • Observe and compare: Lion King antelope stampede sequence with 17th century Palatina Wave Machine • Create wave effects with fabric panels (i.e. poly-silk)	Access to OPA Auditorium Facilities Links (Lion King) http://www.hstech.org/ http://spectacle.appstate.edu/models
Assessment:	**Interdisciplinary Connections:**
Successful completion of Homework Accurate verbal expression/written response Group cooperation Self assessment: Journal	ELA: Journal History: Recollection and focus on prior knowledge Speaking/Listening: Oral expression/Auditory cognition Science: Impact of technological advances Technology: Digital Research

COURSE: STAGECRAFT	GRADES 9-12
UNIT I: Introductions: Stage/Stagecraft/Auditorium	**TOPIC #4:** Historical Overview - Evolution of the Stage

CONTENT:
• Criteria for assessing the historical significance, craftsmanship, cultural context, and originality of art are often expressed in qualitative, discipline-specific arts terminology. • Artistic styles, trends, movements, and historical responses to various genres of art evolve over time.

STUDENT LEARNING OBJECTIVES:
• Compare and contrast stages of Ancient Greece, the Roman Empire, 1st century Japan, Medieval Europe, Elizabethan England, French/Italian Restoration; and contemporary eras. • Explore and evaluate the impact of historical cultural and societal trends on performance venues of different time periods.

Essential Question(s) (General):	Essential Question(s) (Topic Specific):
• How does the past influence the present? • What impact did religion have on ancient and early societies and cultures?	• Did someone "invent" the stage? • Why does a proscenium stage look the way it does?

Suggested Activities:	Resources:
• HW: individually or in pairs, research images of stages/performance spaces from a specific time period. • Presentations of HW findings: oral and demonstrative (using lumber and prop scraps to represent differing stage configurations) • Compare and share presentations to OPA stage through discussion and journal entries. • Creation of a time line using shared knowledge.	Access to OPA Auditorium Facilities http://www.hstech.org/ http://medievaltheatre13.blogspot.com/ http://www.dartmouth.edu/~ukiyoe/kabuki/architecture/index.html https://www.theatrefolk.com/spotlights/japanese-noh http://italianrenaissancetheatre.weebly.com/theatres.html
Assessment:	**Interdisciplinary Connections:**
Successful HW completion and accompanying presentation of findings Timeline execution Group cooperation Self/group assessment: HW and Journal entries	ELA: Journal/Oral presentation History: progression from ancient times Architecture Technology: Digital Research

COURSE: STAGECRAFT	GRADES 9-12
UNIT I: Introductions: Stage/Stagecraft/Auditorium	**TOPIC #5:** Types of Stages/Stage Geography

CONTENT:
• Theatres have various types of stages and performance areas.
• Performance areas/stages are divided into definable areas.
• Certain stages are more conducive for the production of certain productions.

STUDENT LEARNING OBJECTIVES:
• Identify and define the properties of different theatrical performance spaces: proscenium stage; Amphitheatre; thrust (3/4) stage; arena stage (theatre-in-the-round); black box space.
• Hypothesize and express appropriate uses of different stages in relations to specific theatrical genres, traditions and aesthetics.

Essential Question(s) (General):	Essential Question(s) (Topic Specific):
• How do physical spaces and environments impact our intellectual perceptions and emotional state?	• How does the relationship of performing space to audience impact a production? • How are the different parts of the performance area defined?

Suggested Activities:	Resources:
• *PTT*, DVD Program 1, Days 2 & 3 • Game: "Gypsies & Shakespeare" (Ships & Sailors with theatrical terminology embedded). • Create stage maps: C; SR; SL; UC; USR; USL; DC; DSR; DSL • Challenge student groups to create different stage area/audience configurations using chairs to outline the audience space and rehearsal cubes or tape to outline the stage area. • **Unit I Review**	Access to OPA Auditorium Facilities http://www.hstech.org/ *Practical Technical Theatre DVD Series*, Program 1
Assessment:	**Interdisciplinary Connections:**
Game participation Successful completion of stage map Group cooperation Self/group assessment (Journal) **UNIT I: Written Assessment/Performance Task**	ELA: Journal Architecture

COURSE: STAGECRAFT	GRADES 9-12
UNIT II: Personnel and Operations	**TOPIC #6:** Theatre Hierarchy

CONTENT:
• A team of artists, technicians, and managers who collaborate to achieve a common goal uses a broad range of skills to create theatrical performances.

STUDENT LEARNING OBJECTIVES:
• Define the areas of responsibility (e.g., actor, director, producer, scenic, lighting, costume, stagehand, etc.) and necessary job skills of the front and back-of-house members of a theatre company.
• Distinguish skill set required for theatrical creative and technical team positions and determine personal suitability for one or more specific job titles.

Essential Question(s) (General):	Essential Question(s) (Topic Specific):
• What is the importance of the leader/follower relationship in a productive social structure? • What is a hierarchy?	• What is the chain of command on and off stage in a theatre?

Suggested Activities:	Resources:
• *PTT*, DVD Program 1, Days 1 & 2 • Creation of Theatrical Hierarchy web or tree on paper. • Creation of Theatrical Hierarchy web or tree with students on their feet: each student carries identifying signs and they must arrange themselves in correct order of which position their job position has in the hierarchy. • Create a game of *Stagecraft Clue* [i.e. Mr. Body was killed by the Production Stage Manager, in the Right Wing, with a 25lb. counterweight]	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series,* Program 1 http://www.hstech.org/
Assessment: Accurate verbal expression/written response Group cooperation Self/group assessment (Journal)	**Interdisciplinary Connections:** ELA: Journal; Speaking/Listening Careers: Workplace hierarchies

COURSE: STAGECRAFT	GRADES 9-12
UNIT II: Personnel and Operations	**TOPIC #7:** Stage Crew Operations

CONTENT:
• A team of artists, technicians, and managers who collaborate to achieve a common goal uses a broad range of skills to create theatrical performances.
• Theatre production is an art, but it is also a science requiring knowledge of safety procedures, materials, technology, and construction techniques.
• Specific protocols and practices are employed by the stage crew during performances to facilitate smooth operations.

STUDENT LEARNING OBJECTIVES:
• Demonstrate and practice knowledge and abilities necessary to perform basic OPA/OHS Stage Crew functions: Telex operations; protocols for responding to directions from Production Stage Manager; microphone management; curtain management; backstage etiquette; "spiking"; follow spot operation; projection screen implementation.
• Demonstrate and practice proper handling, use, maintenance of XLR, lighting and electrical cables.
• Memorize, justify, recall and demonstrate proper and SAFE procedures for operation of the OPA stage counter-weight rigging system: Glove, Grab, Spot, Shout, Spot, Un-loop, Unlock, Pull, Lock and Loop
• Create and implement hypothetical performance conditions.

Essential Question(s) (General):	Essential Question(s) (Topic Specific):
• What is the importance of "on-the-job training"? • What is the significance of the phrase, "a job worth doing, is a job worth doing well"?	• Who is whose boss on and off stage? • What are stage crew protocols?

Suggested Activities:
• HW: video web search "Over Under Cable wrapping"
• Telex training: proper handling; operations; storage; battery packs
• Proper handling of cables: sound cable folding; "over/under" electric cables and extension cords.
• Types of tape and appropriate uses: gaffers'; spike; channel; duct; masking
• Introduce and practice basic knots used on stage.
• Stage crew drills: simulate mock tech rehearsal and production circumstances; students function as stage crew; spot operators; board operators and performers

Resources:
Access to OPA Auditorium Facilities
http://www.hstech.org/
Video on Rope Tying and Knots for Theatre:
http://www.youtube.com/watch?v=uykleFHqwJI

Assessment:
Active participation in drills
Group cooperation
Self/group assessment (Journal)

Interdisciplinary Connections:
ELA: Journal
Careers: fulfilling specific job-related tasks; discipline

COURSE: STAGECRAFT	GRADES 9-12
UNIT II: Personnel and Operations	**TOPIC #8:** Basics of Sound Amplification-OPA Sound System Operation

CONTENT:
• Theatre production is an art, but it is also a science requiring knowledge of safety procedures, materials, technology, and construction techniques.
• Introductory knowledge of sound amplification in the OPA Auditorium

STUDENT LEARNING OBJECTIVES:
• Identify and explain uses of the various microphones used in the OPA Auditorium and demonstrate procedures for connecting them into the sound system.
• Hypothesize, implement and justify various microphone/amplification set-ups for different events: concert; play; meeting; assembly; etc.

Essential Question(s) (General):
• What is the significance of the phrase, "If a tree falls in the forest, and there is no one there to hear it, does it make a sound"?

Essential Question(s) (Topic Specific):
• How does a sound system work?
• What microphone is best for my needs and how do I make it work?

Suggested Activities:
• Inventory microphones and associated uses.
• Review sound cable folding techniques.
• Trial and demonstrations of microphones and capabilities.
• Guide students through whys and wherefores of microphone configurations: BOE meetings; Music Concert; Dance Concert
• Repeat stage crew drills with addition of microphones.
• **Unit II Review**

Resources:
Access to OPA Auditorium Facilities
http://www.hstech.org/

Assessment:	Interdisciplinary Connections:
Mastery of cable folding procedure.	ELA: Journal
Group cooperation	Science: Acoustics
Self/group assessment (Journal)	Technology: Analog Amplification
UNIT II: Written Assessment/Performance Task	

COURSE: STAGECRAFT	**GRADES 9-12**
UNIT III: Scenic Elements and Set Construction	**TOPIC #9:** Scenic Elements

CONTENT:
• Theatrical settings are created using a variety of methods, the most common being constructed scenery.
• Theatrical scenery can be identified by its elements, components, materials, methods of mobility, artistic genre and other signifiers.

STUDENT LEARNING OBJECTIVES:
• Observe and classify basic terminology and categories of theatrical scenic design: unit sets; box sets; curtain/drop sets; realistic; abstract; etc.
• Recognize, label and compare elements commonly found in scenic designs: cubes; flats; triangles (periaktoi); stationary platform units; mobile platform units (eccyclema); drops; stair units; flown components; set properties/props; hand properties/props; set decoration.

Essential Question(s) (General):	**Essential Question(s) (Topic Specific)**:
• How do artists translate and condense the *world* into *settings*?	• What is a theatrical set composed of?
	• What features define specific types of sets?

Suggested Activities:	**Resources:**
• HW: Web image search for set designs.	Access to OPA Auditorium Facilities
• Classify set design images (HW) into categories: box set; unit set; back drops; fabric/curtained sets; permanent and movable elements; combinations	http://www.hstech.org/
• Using simple paper, cardboard or foam core, create manipulative to represents standard scenic elements. Use to create simulations of set models.	

Assessment:	**Interdisciplinary Connections:**
Successful completion of Homework	ELA: Journal
Active verbal expression	Mathematics: three dimensional shapes/relationships
Group cooperation	
Self/group assessment (Journal)	

COURSE: STAGECRAFT	**GRADES 9-12**
UNIT III: Scenic Elements and Set Construction	**TOPIC #10:** Set Construction: Planning

CONTENT:
• Plans for three-dimensional objects and designs can be expressed in two-dimensional terms using scale measurement.
• Set designs are commonly expressed in two-dimensions using floor plans, elevations and renderings.

STUDENT LEARNING OBJECTIVES:
• Analyze, differentiate and interpret floor plans, elevations and renderings of sample set designs.
• Prepare a hand drawn floor plan (to scale) of the stage with given pre-set scenic elements/requirements.
• Create and render an original floor plan and translate it to the stage floor (*spike* the plan).

Essential Question(s) (General):	**Essential Question(s) (Topic Specific)**:
• How are three-dimensional ideas expressed in two dimensions? • How are mathematic principals used to express objects and spatial relationship?	• What does the term "to scale" mean? • How are set designs expressed?

Suggested Activities:	**Resources:**
• HW: student creates a rough floor plan of a room in his/her home • Create scale floor plans (using 1/4" graph paper) of sample "rooms" (HW) or set configurations created with rehearsal cubes, chairs and spike tape "walls". • Translate floor plans (or configuration of rehearsal cubes) into one-point perspective renderings. • Translate floor plans (or configuration of rehearsal cubes) into elevation sketches. • Exploration of simple CAD software programs (technology availability permitting): Vectorworks; Google Sketchup	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series* http://www.hstech.org/ Tutorial: one-point perspective: http://www.hstech.org/how-to-s/how-to-design/design-research/sketching-drawing-drafting/818-drawing-a-set-on-stage-in-1-point-perspective Google Sketchup Tutorial: http://www.youtube.com/watch?v=OPkv9tRuO-c Article on rendering with Google Sketchup: http://www.edta.org/publications/dramatics/2009/11/renderings-without-tears

Assessment:	**Interdisciplinary Connections:**
Successful completion of HW Successful attempts at written requirements: floor plan, rendering, elevations Group cooperation Self/group assessment (Journal)	ELA: Journal Mathematics: scale and perspective/spatial relationships Architecture: Drafting

COURSE: STAGECRAFT	**GRADES 9-12**
UNIT III: Scenic Elements and Set Construction	**TOPIC #11:** Scenery Shop Safety

CONTENT:
• Evaluating the potential for injury prior to engaging in unhealthy/risky behaviors impacts choices.
• Introduction to creating and maintaining a safe and collaborative working environment for the purpose of scenery construction.

STUDENT LEARNING OBJECTIVES:
• Memorize, recall and demonstrate basic safety procedures for the proper and safe maintenance and storage of all tools and materials used during set construction.
• Express and justify reasoning behind safety procedures regarding work area, personal space and collaborative space.

Essential Question(s) (General):	**Essential Question(s) (Topic Specific)**:
• What is the importance of order and organization in the work place? • Why is "a place for everything, and everything in its place," a vital organizational mantra?	• What are the rules regulating safe procedures for set construction on the OPA stage?

Suggested Activities:	**Resources:**
• PTT, Interactive DVD, Program 2 • Observation, respond (verbal and written) Load in videos • Create simulations of un-safe situations that students must solve. • "Seek & find" exercise: safety equipment (gloves, safety glasses, first aid kit, fire extinguisher, etc.)	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series* http://www.hstech.org/ YouTube search: "IATSE Loads in"

Assessment:	**Interdisciplinary Connections:**
Successful completion of worksheets Active verbal input/response Group cooperation Self/group assessment (Journal)	ELA: Journal; Speaking/Listening Health: Safety Science: Safe Handling of Equipment

COURSE: STAGECRAFT	**GRADES 9-12**
UNIT III: Scenic Elements and Set Construction	**TOPIC #12:** Set Construction: Practical (part 1)

CONTENT:
• Construction requires general and practical knowledge of available tools and materials.
• Overview of safe and appropriate use of measuring tools, cutting and joining tools, power tools, lumber products and theatrical fabrics.
• Scenery construction is different from "real-world" construction. Though it is real and functional it is also temporary and representational.
• Practical application of set construction tools and materials.

STUDENT LEARNING OBJECTIVES:
• Identify, recall and demonstrate operational knowledge, application and proper use of tools used for measuring and marking of materials.
• Identify, recall and demonstrate operational knowledge, application and proper use of hand tools used for cutting and joining of materials.
• Identify and describe types and associated purposes of lumber used for set construction.
• Describe and exhibit knowledge of safe and proper handling for selected power tools: drivers; jig-saw; table saw.
• Identify and describe types and associated purposes of soft goods and fabrics used for set construction.
• Describe and differentiate the nature of flame retardant (FR) and inherently flame retardant (IFR) materials.

Essential Question(s) (General):	Essential Question(s) (Topic Specific):
• What are the practical implications of the saying, "The right tool for the right job"?	• How do I build this set? • Which tools do I use for which job, and how do I use them?

Suggested Activities:	Resources:
• *PTT*, Interactive DVD Series, Program 2 • Tool identification challenges • Tool classification (cutting, joining, measuring or marking?) challenges • Measuring and cutting practice using foam core boards. • Practice use of cutting and joining tools with scrap lumber.	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series*, Program 2 http://www.hstech.org/

Assessment:	Interdisciplinary Connections:
Successful compliance with safety procedures Completion of practice tasks Group cooperation Self/group assessment	ELA: Journal Mathematics: Units of measure Health: First Aid protocols; Safety procedures

COURSE: STAGECRAFT	GRADES 9-12
UNIT III: Scenic Elements and Set Construction	**TOPIC #12:** Set Construction: Practical (part 2)

CONTENT:
• Construction requires general and practical knowledge of available tools and materials.
• Overview of safe and appropriate use of measuring tools, cutting and joining tools, power tools, lumber products and theatrical fabrics.
• Scenery construction is different from "real-world" construction. Though it is real and functional it is also temporary and representational.
• Practical application of set construction tools and materials.
• A production is not over until the stage is clear.

STUDENT LEARNING OBJECTIVES:
• Demonstrate and apply proper usage of all construction tools.
• Construct a flat (full size or scaled down), rehearsal cube or other unit of scenery.
• Observe and relate best practice protocols and safety guidelines for *Strike/Striking the Set*.

Essential Question(s) (General):	Essential Question(s) (Topic Specific):
• Is it possible to create *something* out of *nothing*?	• How are common scenic components constructed? • What is difference between building a set and building a house?

Suggested Activities:	Resources:
• *PTT*, Interactive DVD Series, Program 2 • Discuss and sketch components of a Broadway Flat • Construct 1'x1' frames using 1x3 for rails and stiles and scaled down luan corner blocks and ½" wood screws. Cover with muslin. OR • Construct rehearsal cubes using wood or construct scaled-down versions using foam core. • Practical application of techniques on set for current OPA/OHS production. • Observe, discuss, journal on set strike (load-out) videos	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series*, Program 2 http://www.hstech.org/ http://schooltheatre.org/education/making/cubes YouTube search: "IATSE Loads out"
Assessment: Successful completion of flat construction Accurate verbal expression during discussion Group cooperation Self/group assessment (Journal)	**Interdisciplinary Connections:** ELA: Journal, Speaking/Listening Mathematics: Units of Measurement

COURSE: STAGECRAFT	GRADES 9-12
UNIT III: Scenic Elements and Set Construction	**TOPIC #13:** Elements of Scenic Art

CONTENT:
• Constructed elements of theatrical scenery are finished using a variety of materials, methods, textures and techniques.
• Painting techniques are used to give scenery texture and depth, whether it is realistic or abstract.

STUDENT LEARNING OBJECTIVES:
• Identify and compare scenic painting techniques: dry-brushing; splattering; distressing; sponge techniques; etc.
• Apply and incorporate scenic painting/decoration techniques in the creation of scenery.

Essential Question(s) (General):	Essential Question(s) (Topic Specific):
• What is beautiful? • What are aesthetics?	• What is the difference between a set that represents something real and a set that suggests something real?
Suggested Activities: • Reading: "Painting the Scene" by Sean O'Skea (see link in *Resources*) • Practice painting techniques on mini flats built in construction lesson: basic application; scumbling; dry brushing; texturing with sponge. • Practical application of techniques on set for current OPA/OHS production • **Unit III Review/Midterm Review**	**Resources:** Access to OPA Auditorium Facilities http://www.hstech.org/ http://schooltheatre.org/education/making/painting-scene
Assessment: Accurate verbal expression/written response Group cooperation	**Interdisciplinary Connections:** ELA: Journal Visual Art

Self/group assessment
UNIT III: Written Assessment/Performance Task (construction of flat)
Midterm Exam

COURSE: STAGECRAFT	GRADES 9-12
UNIT IV: Design/Practical Applications for Lighting, Set, Sound	**TOPIC #14:** Theatrical Lighting Basics

CONTENT:
• Theatrical lighting design is accomplished with specific types of lighting fixtures that differ according to lamp types, lens types and lens configuration.
• Different lighting fixtures have different uses, qualities and purposes.

STUDENT LEARNING OBJECTIVES:
• Identify and recall names of lighting instruments in the OPA Auditorium: ellipsoidal reflector (Lekolite); Fresnel; par can; border lights; scoops; cyclorama lights; follow spot.
• Summarize and contrast common usages of specific lighting instruments and lighting accessories.
• Demonstrate proper procedures for the hanging and focusing of lighting instruments.
• Observe and apply <u>basic</u> knowledge of OPA light board operation: on/off; master dimmers; sub-master presets.

Essential Question(s) (General):	**Essential Question(s) (Topic Specific)**:
• What is meant by the phrase, "Seeing is believing"? • How is narrative expressed visually in a live setting?	• What are the components of a theatrical lighting system? • How many technicians does it take to switch a light bulb? [It's NOT a BULB! It's a LAMP!]

Suggested Activities:	**Resources:**
• *PTT*, DVD Series, Program 3 • Perform light maintenance (dusting without moving the fixtures) on instruments on stage electrics. Identify types of fixtures, connectors (plugs: L5 twist-lock), gels (color filters), gel frames, **safety cables**, C-clamps. • Exploratory "surgery" on extra fixtures: take apart, switch out lamps, etc. • Create a focus template for the stage floor: position large sheets of paper and outline the pools of light. Strike and re-hang and re-focus specific instruments based on the focus template.	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series* Program 3 http://www.stagelightingprimer.com/index.html?slfs-cables.html&2 http://www.hstech.org/ Interviews with Theatre Professionals: http://americantheatrewing.org/careerguides/

Assessment:	**Interdisciplinary Connections:**
Accurate recording and recalling of lighting fixtures and vocabulary Group cooperation Quiz: lighting instruments Self/group assessment (Journal)	ELA: Journal Technology: Electrical knowledge Science: qualities of light/reflection Math: degrees/angles (defines lighting field)

COURSE: STAGECRAFT	GRADES 9-12
UNIT IV: Design/Practical Applications for Lighting, Set, Sound	**TOPIC #15:** Intro to Lighting Design

CONTENT:
• The fundamental objectives of the lighting designer are to illuminate the action, establish the setting/mood, and help to tell the story.
• Careful analysis of the text and contextual research are required to render an effective theatrical design.
• Basic qualities of light include hue (color), intensity (brightness) and focus (direction).

STUDENT LEARNING OBJECTIVES:
• Recognize and practice precepts of text analysis in relation to the creation and execution of lighting design.
• Express and utilize the importance of image research in the creation and execution of theatrical lighting design.
• Hypothesize and inventory components necessary for the execution of lighting requirements for a given text.
• Create and execute an original lighting look based on simulated text/directorial requirements.
• Observe and discuss recorded interview(s) with professional, theatrical lighting designer(s).

Essential Question(s) (General):	**Essential Question(s) (Topic Specific)**:
• How does understanding a text affect my ability to express its themes and overall meanings? • How is one art form translated into another?	• How can a designer create a world using light? • How can a designer tell a story using light?

Suggested Activities:	**Resources:**
• *PTT*, DVD Series, Program 3 • Text analysis lesson plan based on "Dark & Stormy Night" by Scott C. Parker, *Dramatics*, Jan. 2009 • "Lighting the Subject" lesson: students observe and qualify different lighting looks, then proceed to create "mini" design plots	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series*, Program 3 http://schooltheatre.org/education/making/it-was-dark-and-stormy-night http://www.stagelightingprimer.com/index.html?slfs-cables.html&2 http://www.hstech.org/

Assessment:	**Interdisciplinary Connections:**
Accurate verbal expression/written response (Journal) Successful completion of accompanying worksheets Performance Task: mini-design plot Group cooperation Self/group assessment	ELA: Journal Technology: Electrical knowledge Science: qualities of light/reflection Math: degrees/angles (defines lighting field)

COURSE: STAGECRAFT	GRADES 9-12
UNIT IV: Design/Practical Applications for Lighting, Set, Sound	**TOPIC #16:** Basics of Set Design: Concepts/Research/Collaboration

CONTENT:
• The fundamental objectives of the set designer are to establish the setting/mood, assist the directors and actors in establishing a believable world, and to help tell the story.
• Careful analysis of the text and contextual research are required to render an effective theatrical design.
• Set design is impacted by many variables including: directorial vision; budget; spatial limitations; functionality; flow of transitions.
• Designers must not only express their work using narrative, diagrams (Computer Aided Design) and three-dimensional models, but they must also be able to communicate the abstract ideas of their designs verbally.

STUDENT LEARNING OBJECTIVES:
• Recall and compare text analysis and research strategies for lighting design and apply them to theatrical scenic design.
• Develop and execute set design for a scene for a hypothetical or real production incorporating at least one, seamless setting transition (scene change).
• Construct a three-dimensional model to represent and original set design.
• Observe and discuss recorded interview(s) with professional, theatrical set designer(s).

Essential Question(s) (General):	**Essential Question(s) (Topic Specific)**:
• In what way is a designer also a "problem solver"? • How is one art form translated into another?	• How does a set designer create a believable and cohesive "world" for a production? • What is the importance of a "seamless transition" is set design?

Suggested Activities:	**Resources:**
• *PTT*, DVD Series, Program 6 • Text analysis (excerpts) for OHS/OPA Musical and research contextual elements: genre, time period, previous productions • Lesson Plan: *IRONMAN the Musical*. Create designs for hypothetical musical. • Observe, discuss and propose different methods of transitions (scene changes) • Create models of proposed set designs	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series*, Program 6 http://www.hstech.org/ *For additional resources, see UNIT III, Topic #10* Interviews with Theatre Professionals: http://americantheatrewing.org/careerguides/

Assessment:	**Interdisciplinary Connections:**
Active verbal expression Successful completion of worksheets and journal entries Group cooperation Self/group assessment	ELA: Writing, Speaking/Listening, Reading Mathematics: Geometric principals

COURSE: STAGECRAFT	**GRADES 9-12**
UNIT IV: Design/Practical Applications for Lighting, Set, Sound	**TOPIC #17:** Intro to Sound Design

CONTENT:
- The fundamental objectives of the theatrical sound designer are to amplify live sound when necessary, and employ the use of additional music/sound effects to establish setting/mood with and to help tell the story.
- Careful analysis of the text and contextual research are required to render an effective theatrical design.
- Designers must not only express their work using narrative and diagrams, but they must also be able to communicate the abstract ideas of their designs verbally.

STUDENT LEARNING OBJECTIVES:
- Recall, compare and contrast text analysis and research strategies for set and lighting design and apply them to theatrical sound design.
- Assess and inventory components necessary to execute sound design for two different styles of stage events.
- Compose and produce a narrative using music excerpts and sound effects with only minimal (or no) recorded text.
- Observe and discuss recorded interview(s) with professional, theatrical sound designer(s).

Essential Question(s) (General):	Essential Question(s) (Topic Specific):
• How does sound impact our mental, physical and emotional states? • How is one art form translated into another?	• Besides amplification of live sound, what does a sound designer do? • How is sound used to enhance the creation of the "world" of a production?

Suggested Activities:	Resources:
• *PTT* DVD Series, Program 4 • Create a "sound story" using sound effects and musical clips (narrative should be minimal or non-existent). Students may then create lighting plots to accompany their sound story compositions. • Simulate two different types of events for which students must develop and propose ("Pitch") sound plots to accommodate the needs of the event.	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series*, Program 4 http://www.hstech.org/ Interviews with Theatre Professionals: http://americantheatrewing.org/careerguides/

Assessment:	Interdisciplinary Connections:
Accurate verbal expression/written response Group cooperation Self/group assessment	ELA: Writing, Speaking/Listening, Reading Music Science: Acoustics

COURSE: STAGECRAFT	GRADES 9-12
UNIT IV: Design/Practical Applications for Lighting, Set, Sound	**TOPIC #18:** Sound System Operations: Practical Application

CONTENT:
- Execution of theatrical sound design requires knowledge of live sound amplification techniques.
- Sound design is impacted by many variables including: directorial vision; budget; available equipment; performance space; performers' vocal abilities.

STUDENT LEARNING OBJECTIVES:
• Recall and restate types of microphones and their associated uses: dynamic/cardioid vocal (wired and wireless); condenser/cardioid; boundary; lavaliere.
• Observe and apply <u>basic</u> knowledge of OPA sound board operation: on/off; frequently used channels; frequently used subs; frequently used components

Essential Question(s) (General):	**Essential Question(s) (Topic Specific)**:
• How does auditory input impact our lives? • What has the increasing volume of "the world" (noise pollution, mp3 players, greater volume in smaller sound devices) done to the human capacity to *listen*?	• How high is *too loud* and how low is *not loud enough*? • How important is microphone placement?

Suggested Activities:	**Resources:**
• Using lavaliere microphones simulate production where performers are individually mic'ed. All students learn and practice proper microphone placement and handling, and observe board operation. Advanced students learn and practice sound board operation. • **Unit IV Review**	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series* http://www.hstech.org/

Assessment:	**Interdisciplinary Connections:**
Accurate verbal expression/written response Group cooperation Self/group assessment **UNIT IV: Written Assessment/Performance Assessment**	ELA: Writing Science: Acoustics Technology: Electronics

COURSE: STAGECRAFT	**GRADES 9-12**
UNIT V: Production Management/Careers	**TOPIC #19:** Production Stage Management (part 1)

CONTENT:
• The duties of Production Stage Manager (PSM) are defined differently in amateur, educational, and professional theatre settings.
• The PSM facilitates a productive and functional environment during the rehearsal process.
• The PSM must not only apply critical thinking to solving problems arising during production/performance, but also to anticipate and resolve problems *before* they happen.
• The PSM is responsible for the smooth running of a show during performance; *all* cast and crew are under the PSM's direction.
• In professional settings the PSM is responsible for compliance with Actors Equity Association (AEA) rules and regulations.

STUDENT LEARNING OBJECTIVES:
• Define and summarize the necessary skill set and duties required of a theatrical production stage manager.
• Organize and prepare comprehensive prompt book (production script) excerpt with detailed cue sheet. (Can be based on designs executed during earlier units.)

Essential Question(s) (General):	Essential Question(s) (Topic Specific):
• What is the nature of management in the work place? • What is the importance of a command structure in a working environment?	• Who is in charge of a show in performance? • What are the differences between amateur, educational and professional theatre?

Suggested Activities:	Resources:
• *PTT* DVD Series, Program 6 • Prepare a written assessment of personal performance in Stagecraft I and relate it to personal skill set needed to be a PSM. • Create a promptbook using/compiling selected design work from previous classes. • Create checklist for simulated "first rehearsal" or agenda for "first production meeting". • Execute cues in created prompt book in simulated tech rehearsal	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series*, Program 6 http://www.hstech.org/ Interviews with Theatre Professionals: http://americantheatrewing.org/careerguides/

Assessment:	Interdisciplinary Connections:
Accurate verbal expression/written response Group cooperation Self/group assessment	ELA: Writing

COURSE: STAGECRAFT	GRADES 9-12
UNIT V: Production Management/Careers	**TOPIC #19:** Production Stage Management (part 2)

CONTENT:
• The position of Production Stage Manager (PSM) is defined differently in amateur, educational, and professional theatre settings.
• The PSM facilitates a productive and functional environment during the rehearsal process.
• The PSM must not only apply critical thinking to solving problems arising during production/performance, but also to anticipate and resolve problems *before* they happen.
• The PSM is responsible for the smooth running of a show during performance; all cast and crew are under the PSM's direction.
• In professional settings the PSM is responsible for compliance with Actors Equity Association (AEA) rules and regulations.

STUDENT LEARNING OBJECTIVES:
• Prepare (written), perform and self-assess a simulation of a production stage manager at work in one of the following situations: calling a portion of a show; running a "brush up" rehearsal; conference with actor in violation of union procedures.
• Participate and improvise with classmates in PSM simulations and provide verbal feedback and written critique.
• Observe and discuss recorded interview(s) with professional, production stage manager(s).

Essential Question(s) (General):	Essential Question(s) (Topic Specific):
• How can problems be solved before they arise? • What is the importance of a command structure in a working environment? • What are effective strategies to resolve personal conflict?	• Why are PSMs represented by the same labor union as actors? • What inter-personal skills does a PSM need?

Suggested Activities:	Resources:
• *PTT* DVD Series, Program 6 • Execute cues in created prompt book in simulated performance setting • Collaborative groups prepare and propose "What if…" situations relating to problems that might arise any time during rehearsals, tech week, or the run of a production. Individual students play the part of PSM and work to resolve the situations. Student groups critique and self assess.	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series*, Program 6 http://www.hstech.org/ Actors Equity web site: http://www.actorsequity.org/

Assessment:	Interdisciplinary Connections:
Accurate verbal expression/written response Group cooperation Self/group assessment	ELA: Writing, Reading, Speaking/Listening Conflict Resolution

COURSE: STAGECRAFT	GRADES 9-12
UNIT V: Production Management/Careers	TOPIC #20: Theatrical Careers/Union Affiliations

CONTENT:
• Career preparation requires purposeful planning based on research, self-knowledge, and informed choices.
• Understanding the rules and requirements of theatrical unions is necessary to pursue a career in professional theatre.
• Types of jobs in the theatrical and entertainment industries are numerous and vary significantly.

STUDENT LEARNING OBJECTIVES:
• Research and discuss careers in technical theatre.
• Participate and improvise with classmates in PSM simulations and provide verbal feedback and written critique.
• Assess personal skill set/knowledge and hypothesize an appropriate job position with regards to technical theatre, production team or creative team.
• Identify and summarize the roles of Actors Equity Association (AEA), International Alliance of Theatrical Stage Employees (IATSE), Stage Directors and Choreographers Society (SDC) and United Scenic Artists Local USA 829 (USA829).
• Propose and research an educational pathway to working in a targeted discipline related to technical theatre.

Essential Question(s) (General):	Essential Question(s) (Topic Specific):
• What do you want to be when you "grow up"? • What steps are necessary to plan for a fulfilling and productive future?	• What knowledge and skills are necessary to pursue a career in theatrical design or technical theatre? • What educational and/or professional qualifications are necessary to pursue a career in theatrical design or technical theatre?

Suggested Activities:	**Resources:**
• *PTT* DVD Series, Program 9 • HW: Create a "game plan" for a targeted career path, regardless of whether it is a path towards a career in theatre. • Consult *Dramatics* magazines annual college issue to target schools that offer technical theatre/theatrical design degrees • "Seek and find" web hunt for information on unions governing the entertainment industry • **Unit V review** • **Final Exam Review**	Access to OPA Auditorium Facilities *Practical Technical Theatre DVD Series*, Program 9 http://www.hstech.org/ http://schooltheatre.org/education/college-preparation/college-resources
Assessment: Successful completion of Homework Successful completion Worksheets and Web Hunt Accurate verbal expression/written response Group cooperation Self/group assessment (Journal) **UNIT V: Written Assessment/Performance Assessment** **Final Exam**	**Interdisciplinary Connections:** ELA: Writing, Speaking/Listening Career Preparation Technology: Research

ADDITIONAL RESOURCES

PUBLICATIONS
The Stagecraft Handbook, Daniel Ionazzi, Betterway Books, 1996
The Backstage Handbook: An Illustrated Almanac of Technical Information, Paul Carter, Broadway Press, 1994
Technical Theater for Nontechnical People, Drew Campbell, Allworth Press, 2004
Stagecraft Fundamentals Second Edition, Rita Kogler Carver, Focal Press, 2012
Scene Design: A Guide to the Stage, Henning Nelms, Dover Pbns, 2011
The Perfect Stage Crew, John Kaluta, Allworth Press, 2003

INTERNET LINKS
Broadway League web site: http://www.broadwayleague.com/index.php
Broadway League's productions information site: http://www.broadway.org/
Theatre Communications Group web site: http://www.tcg.org/index.cfm
Educational Theatre Association publication search engine: http://schooltheatre.org/education/making
Stage Lighting Primer web site: http://www.stagelightingprimer.com/index.html?slfs-cables.html&2
HS Tech Stage Design and Technology web site: http://www.hstech.org/
International Association Theatrical Stage Employees web site: http://www.iatse-intl.org/
Actors Equity web site: http://www.actorsequity.org/
Projection, Lights and Staging News web site: http://www.plsn.com/
National Theatre, UK, YouTube channel: http://www.youtube.com/user/ntdiscovertheatre/featured
National Standards for Arts Education https://artsedge.kennedy-center.org/educators/standards