



**Career Exploration Extension**  
Grades 3-4  
Light and Sound Unit  
[Career: Lighting Designer](#)

### Videos

Theater Lighting Design <http://ow.ly/aROu50CF5Cb>



Lighting, Music, and Sound Design <http://ow.ly/qUeB50CF5JT>



Annie On Broadway: What Does a Lighting Designer Do? <http://ow.ly/OuHF50CF5Jo>



### Printable Resources & Evidence Piece

Share some facts about a lighting designer so students can complete the lighting activity.

- ❖ Get into theatre <https://getintothatre.org/blog/what-does-a-theatre-lighting-designer-do>
- ❖ Appalachian State University | Department of Theatre and Dance <https://theatreanddance.appstate.edu/lighting-and-sound/lighting-designer>
- ❖ American Association of Community Theatre <https://aact.org/lighting-designer>
- ❖ Macgillivray Freeman's Dream Big Engineering Our World Daylight in a Bottle [www.discovere.org/sites/default/files/Educator%20Guide\\_Grade%201\\_032318.pdf](http://www.discovere.org/sites/default/files/Educator%20Guide_Grade%201_032318.pdf) (page 7)

### Activity Questions

1. How did the lighting changes you tried in the activity affect the picture?
2. What kind of other changes can you try to change the color, focus, or intensity of the light? (try using a mirror, markers, colored paper).
3. Pick a mood for the picture. What do you need to do to change the lighting to fit that mood?

# The Lighting Designer's Job

## The basics

Lighting designers know how to make the best use of the subtle and powerful medium of light, creating effects that can be changed at will to match the mood of the action.

At its most basic, stage lighting functions to make the actors and their environs visible to the audience. But it can also be used to:

- Evoke the appropriate mood
- Indicate time of day and location
- Shift emphasis from one stage area to another
- Reinforce the style of the production
- Make objects on stage appear flat or three dimensional
- Blend the visual elements on stage into a unified whole



## The Designer's work

The lighting designer begins by reading the script to be produced noting the type of light it calls for in each scene. Designer and **director** share their ideas about how light could be used to enhance the production concept at their first meeting. Early meetings with the **set designer** are also important because the set and lighting designers must collaborate on how to achieve the desired "look" for the play. The plan for the set may influence the placement and direction of the necessary lighting instruments, so flagging any potential problems in this area as early as possible makes sense.

Lighting designers attend rehearsals to get a feel for the lighting cues and to plan how to light the actors as they move from place to place on stage. When the blocking is set, the lighting designer can start to work out which lighting instruments will be used and where each one will be located.

## Planning tools

The planning tools lighting designers use include:

- Paintings and photos showing the mood and style of specific lighting techniques and are gathered through research

- A lighting plot: a scale drawing of the stage and set as seen from above showing the planned layout of each lighting fixture to be used
- A vertical section plot: a cross-section of the stage and set drawn to scale showing the vertical sightlines and the height and position of each instrument
- An instrument schedule: a chart that lists each lighting instrument separately along with the details of its type, wattage, purpose, filter color, the dimmer it will be plugged into and the circuit that will control it
- A cue sheet: a complete list of the various lighting effects the designer has planned for the show and when they occur.

## Collaboration

The lighting designer will meet with the **director** and the design team (**set**, **costume**, and **sound** designers), to discuss the details of the set and the director's interpretation of the play. The set, costume and lighting designers also meet and work together to ensure the creation of a unified look and feel for the production. A lively exchange of initial ideas and first impressions helps clarify the steps that each person needs to take in this intensely collaborative process.

Once the show opens, the designer's work is essentially complete. Now it's normally the job of the **stage manager** and light crew to make sure that every aspect of the production runs just as the designer intended, time after time, until the production closes.

## Typical Duties

- Collaborates with Director on establishing a lighting design
- Collaborates with Director, set and Costume Designer on a color palette
- Creates a lighting plot, ground and elevation plan
- Creates cue sheets
- Attends production meetings
- Attends first rehearsal and presents design concept
- Attends other rehearsals as available
- Coordinates rental of additional lighting equipment
- Attends load-in, lighting hang, lighting focus, level set, dress rehearsals, etc.
- Works within the production budget

## Master Electrician

The Master Electrician is responsible for taking the Lighting Designer's lighting plot and making sure that all lighting units on the plot are hung in the correct locations and actually work. Coordinating the numbers of lights and circuits and allocating cabling, gels, and other accessories are the most important aspects of this role. In many theatres, the lighting designer often ends up sharing many of the typical ME roles, so the job gets done by both.



## Department of Theatre and Dance

# Lighting Designer

<https://theatreanddance.appstate.edu/lighting-and-sound/lighting-designer>

## Description

The **Lighting Designer** is responsible for the design, installation, and operation of the lighting and special electrical effects used in the production. To show where the lighting equipment will be placed, the lighting designer produces a light plot specifying the placement and configuration of all instruments used in the production. The designer must also furnish all associated paperwork for the design including hook-ups, schedules, cut lists, and a cue synopsis. (Based on the description in J. Michael Gillette's *Theatrical Design and Production*, 6<sup>th</sup> ed.)

## Expectations

1. Read the script several times, taking note of overall story and theme and specific physical needs. Determine research and dramaturgical needs.
2. Consult the departmental production calendar and note all due dates. It is important that you meet these dates because it affects the work of so many other people.
3. Attend all design and production meetings. Make sure the stage manager has all of your current contact information.
4. Obtain a current section and groundplan of the theater from your mentor or the technical director.
5. Schedule a conversation about the play with the director and your mentor. Whenever possible it is best if this includes the entire design team. Discuss overall production concept, theme, style, period, etc.
6. Review script, noting both "broad-stroke" and "moment to moment" demands.
7. Begin attending rehearsals regularly, these should be run-throughs whenever possible.
8. Develop preliminary concept statement and begin rough cue synopsis.
9. Meet with the director and your mentor and agree upon the overall production and lighting concept approach (concept statement).
10. Develop a light plot in Vectorworks and instrument schedules, magic sheets, and other supporting paperwork in Lightwright as necessary.
11. Meet with your mentor for plot and preliminary design approval at least one full day before presenting it to the director or other production team members.
12. Once your plot is approved, it should be given to the technical director along with any accompanying paperwork so that they may order gels, templates, etc. Please note that you are not authorized to order anything unless you receive specific **prior** approval by your mentor.
13. Meet with scenic designer, costume designer, and your mentor to discuss color. Meet with the scenic designer to discuss all masking, flying, shifting scenery, and any wired practicals.
14. Complete a cue synopsis that details all lighting shifts and changes.

15. Meet with the technical director to coordinate hang, focus, dark time, etc.
16. Pre-tape catwalks and grid when possible to assist the hang process. This is a method of marking hang positions for instrument type, circuit and dimmer number, and other relevant information. Due to the fairly unique architecture of the Valborg Theater this is also an excellent opportunity to check for any architectural issues that may arise at focus.
17. Check in with the technical director daily to monitor progress during the hang period.
18. Direct the focus and dropping of color and templates.
19. Inspect electric areas and double-check the hang, cable, and focus for work safety.
20. Set up board, load patch, subs, groups, and submasters in the days prior to building cues.
21. Build cues, presets, set levels, special lighting, and effects. Please note that pyrotechnics are not the responsibility of the lighting designer, and any pyrotechnic requests must go through the technical director.
22. Arrange a meeting with the director, stage manager, and the other production team members for a "Paper Tech", so that you may go through the show cue by cue prior to the first tech rehearsal. This may take several hours to complete.
23. Check for the install of all necessary cue lights, running lights, costume change lights, prop work lights, and design table lights as required for tech rehearsal. If it lights up it's yours to worry about. If it needs electricity it is yours to provide.
24. Attend all tech and dress rehearsals and evaluate, plan, and rework all light cues as necessary. Continue polishing and improving cues and lightplot until the final rehearsal. Please note that if a cue has not been seen on stage during a tech/dress rehearsal it should not be added at the last moment. There should be nothing new to see for an opening performance unless approved by both your advisor and the director.
25. Attend photo call to get photographs of your design. Submit to the stage management team a very short list of specific full stage shots you would like from the professional photographer. The total number of set-ups that the photographer can take is very limited so it would be best if your list is in order of preference. You should also take your own photographs.
26. Meet with the technical director and your mentor to discuss strike. The requirements for each strike will vary based on the nature of the show and any production needs following the production being struck. The first order of any strike should be clearing any practicals or other instruments on stage so that the carpenters may complete their strike quickly and efficiently. This includes the strike of the cyc, scrim, and other masking.

# What does a Lighting Designer do?

A Lighting Designer will work with the Director, Artistic Director and/or Lighting Technicians to create the visuals for lighting, lasers, strobes, spots and sometimes video screens for a performance.

## What are the main responsibilities of a Lighting Designer?

- Work with the creative team to come up with ideas
- Design the lighting needed for the performance
- Be aware of health and safety aspects
- Write a lighting plot/script to note where there are any lighting changes
- Attend technical rehearsals
- Be aware of budgets and energy use

## What qualifications do I need to be a Lighting Designer?

While you do not need a degree for this role, here are some useful subjects and courses that you can study to gain knowledge and experience.

School subjects that are relevant for lighting design are:

- Drama and Theatre Studies
- Art and Design
- Electronics
- Physics
- Photography
- Media Studies

Further education at colleges or universities:

- Lighting Design and Technology
- Technical Theatre
- Theatre Lighting Design
- Electrical Engineering

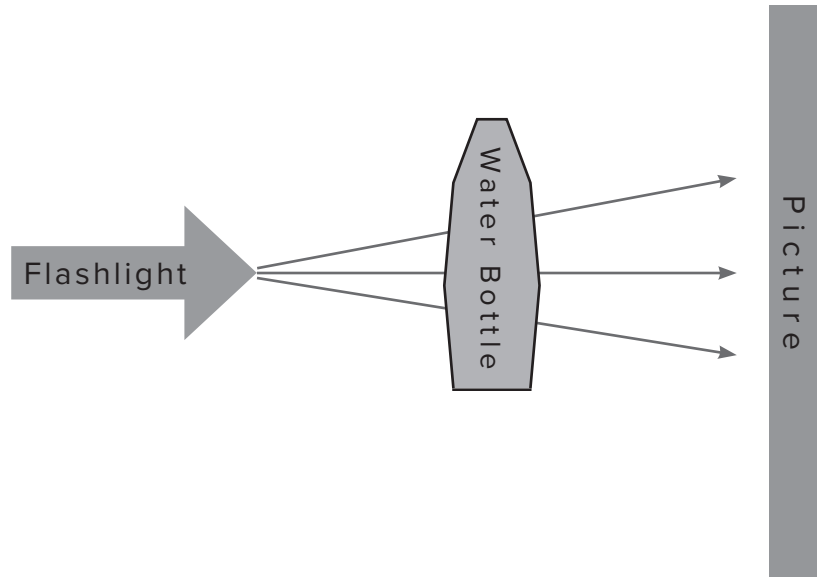
## What skills do I need to be a Lighting Designer?

These are the desirable skills to have which would make you an ideal candidate for a Lighting Designer role:

- Technical skills
- Ability to work under pressure to tight deadlines
- Good communicator
- Excellent color vision

# LIGHT IN A BOTTLE TESTING SHEET

Prop a picture up against some books or tape it to a wall. Place a water bottle 6 inches in front of it. Turn off the light to the classroom and turn on a flashlight. Shine the flashlight through the water bottle and onto the picture and record what it looks like!



1. Empty bottle:
2. Full water:
3. Half full with oil:
4. Half full with water and 1 drop food coloring:
5. Half full with water and 5 drops food coloring:
6. Painted outside of bottle: