THE LIGHT LADY

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WHOLE LEARNING AND STAGE LIGHTING

Tell me and I'll forget
Show me and I may remember
Involve me and I'll understand

Stage Lighting utilizes a blend of **technical knowledge**, **artistry** and **physical effort**, as well as the concepts and principals of **maths** and **science**. One must be able to do basic algebra and apply this computational knowledge to the study of electricity. Light itself is a radiant energy in one octave of the electromagnetic spectrum, identified by frequency of wavelength. The color of light is a fascinating scientific phenomenon to study in and of itself. The use of **technology** is also incorporated into Stage Lighting, as crew members use mechanical or computer operated light boards and take apart lighting instruments to clean or repair them, and in doing so learn how they work. This **hands-on**, **participation** is crucial for the understanding of the stage lighting system.

Historically lighting was an engineering discipline, and it is only in recent decades that those with a knowledge of the science of lighting have combined it with their artistic talents to become Lighting Designers. To some extent **artistry** may be an inborn trait, however art techniques can be taught, and the artistic talent, which I believe is within each of us, can be tapped. In working with lighting I have learned about color choices, mixing colors, how different light angles affect the viewer's perception of an object, how to enhance an "object" (usually an actor or set piece), and how to create mood using color, angles and intensity of light. These disciplines draw from both **scientific fact** and **artistic talent**.

Drafting is also an important skill that Lighting Designers must know in order to communicate their design (the Light Plot) to the crew. Being able to draft and read a Light Plot is an essential part of **communication** for all those involved in technical theatre. While a lot of drafting and subsequent data sheet production is still done by hand, **CAD** (Computer Aided Drafting) is becoming more and more prevalent in theatre today, so one must also have **computer skills**. One must also be able to **read** and quickly **comprehend** scripts as well as instructions, cue sheets and technical data schedules and other written information pertinent to the production. A basic back ground in theatre **literature** is also essential. Then once the script has been analyzed, the light plot has been drafted and the patch schedule is drawn up, little time is spent sitting at a desk. Hanging and Focusing a production can be quite a rigorous **physical task**; ladders to climb, heavy instruments to carry, bolts that won't loosen, a lot of walking around and running here and there! The communication at this point becomes direct, personal and human. It is essential to have good **communication skills** when working in this **teamwork environment**, and even more so once the technical rehearsals start. One must be able to clearly and effectively, through **written** and **verbal** means, **communicate** to all other members of the production team, whether you are the designer, the crew or the running operators.

Analytical thinking, **problem solving**, and **creativity** are also very important skills in technical theatre , as every play, show, dance and assembly is different. One needs to **draw from what they have learned**, **integrate** their experience and knowledge, and **apply** it to each production. Each design will be different, and the problems that come up will be different for each production, and good **decision making skills** are important. **Tenacity** is also a good trait to have or develop, as rehearsals can sometimes be long and tedious. Students must be able to **focus their attention** for an extended

period of time on the instructions given to them, and to quickly and correctly record and execute the cues each time. Rehearsals can also be hectic and frustrating at times, so **patience** is a virtue well tested.

In the educational experience of technical theatre, as in many job situations, you are often times the only person who can do your job, so **self-responsibility** and **independent thought** are also essential. You turn up through sickness and in health. While lead actors will often have understudies, this is not the case with the tech crew. If you don't turn up one day it may be quite difficult for someone not familiar with what you were doing to take over. When you are the Light Board Operator, for instance, your job can be quite complicated. It is the Light Board Operator's **responsibility** to the Lighting Designer to know how to run the board, and make accurate and **legible** records at rehearsals, so that the cues can be duplicated, as designed, at the next rehearsal and at performances. It is the Light Board Operator's **responsibility to the cast** to write down cues and notes clearly so that someone could take over in an emergency. The Lighting Designer and his or her crew have a **responsibility to the director** and the cast to execute appropriate cues at the correct time, with the correct emphasis. **Dependability** is also a vital and necessary trait in such an environment.

One must then take all those traits and skills mentioned above and apply them in a team situation. **Teamwork** involves people of different skills and backgrounds working together to create one end result, in this case, a show. Working on a team can be challenging, because while people with different skills and mind sets are needed to fill each discipline it can also be hard to work with someone who doesn't think quite like you do. The teamwork one experiences in the Lighting Crew helps students learn to work with different people, to appreciate these differences, to see how they can be valuable. You learn how to work as a **leader** one minute and a **follower** the next. For example, Lighting Designers are experts at what they do. They are in charge of the crew who is running the show, and they have the **responsibility** of creating the best lighting design, with the **artistic** and **technical** knowledge they have acquired. Yet, ultimately, the director is in charge, so the designer must use their skills to make the director's vision come to life. The Lighting Designer simultaneously leads the light crew, and is lead by the director. Teamwork is often like this in the "real" work world. You may be a leader in your field, but at the same time, you can be a subordinate to a "boss" or other company. Learning how to combine these two begins at school, and probably takes a lifetime to master.

The specialized topic of Stage Lighting can also be **integrated into curricula** in many ways. In an **art class** students can be taught to see how painters, photographers and other artists use light in their work. In a **technical drafting class** teachers can incorporate drafting lighting plots for the stage and/or lighting plans for buildings into their lessons. When studying **architecture** teachers could incorporate architectural lighting as a part of their lesson plans. The history of lighting is fascinating and could be incorporated into **history** or **social sciences** lessons about how people once lived and the technology they used. The study of electromagnetic wavelength, properties of light (such as reflection, refraction and color) and electrical theory will fit in well within a **science** curriculum. In fact, both the National Academy Press and the American Association for the Advancement of Science publish education standards and benchmarks for the subject of light. (Please see below). Figuring out lighting needs for the theatre primarily uses the formula W=VA (watts equals volts times amps), which is an exercise in simple algebra and can be incorporated into classroom **math** problems. Students and researchers in the **health** and **human growth and development** fields are also only just beginning to realize how the study of light is important to them, too. Stage lighting is a discipline that draws from many aspects of the standard curriculum.

While not every student will want to be a Stage Lighting Designer or technical crew member as a career (although there are those who make a living from it), the **whole learning experience in the educational setting** is invaluable in helping prepare students for the "**outside world**".