

Volunteer Leader Training Guide

Improving Lighting in Your Home

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Objectives

- To inform participants of the importance of proper lighting in their homes.
- To inform participants of how lighting can be improved.
- To inform participants on how to get the most out of lighting.

Target Audience

- EHC leaders
- Middle-aged men and women

Opening Activity

- After everyone is seated, turn off the lights or at least a few to darken the room. Ask a couple of participants if they can read a portion of your handout. Ask the class if they can see any light coming in from anywhere in the room; for example, the hallway, outside, adjacent rooms, etc.
- Turn the lights back on and explain to the class that you will be discussing lighting, how important it is and ways we can improve lighting in the home.

Introduction

Lighting is such an important aspect of daily living. Light sources are found throughout the home as well as outside the home. Lighting allows us to get dressed in the morning, read the newspaper, take care of household chores and the list goes on and on. Lighting is so important; yet it often is not used properly or efficiently in today's households.

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Lighting is helpful for:

- better sight.
- performing specific tasks.
- pleasure.
- making interiors more attractive.

As we age, lighting becomes more of an issue in our homes, at work and in any space where we need to be able to see. Our eyes grow weaker. Some may have to start wearing glasses, and we become fully aware that we need more light.

We are going to focus on improving lighting in your own home. You will learn the importance of lighting, how to use lighting efficiently and how to make your home look more attractive.

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What Is Light?

Light can be defined in several ways. Light is usually considered a sense of visibility, a reflection off of other objects, and light is color.

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Types of Lighting

1. **Ambient** – an illumination of objects in a given space, usually comfortable levels of brightness, and provides practical sight and visibility.
2. **Task** – used for specific areas in a space to perform certain tasks, such as reading, writing or sewing.
3. **Accent** – used for highlighting, adding emphasis to a particular area, to create a certain mood or interest and for spotlighting particular objects such as a sculpture or paintings.
4. **Decorative** – used to decorate and add elements of design to a space such as a chandelier or candles.
5. **Natural** – sunlight, candlelight and firelight.

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You may incorporate each type of lighting into a room by layering. In one area, you may have a lamp on an end table to provide light for reading. In another area, accent lighting may be used to display your favorite piece of artwork. Ambient lighting in the center of the room can be used to provide overall illumination.

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One of our most important sources of light is sunlight. Sunlight provides the most natural light, which is better for your vision. On sunny days, you may want to pull the curtains back to read your favorite book or sit out on the porch and watch the birds and squirrels. Sunlight can add warmth to your home, cast shadows and different reflections of light into your home, as well as reduce your electric bill.

There are a few negative points to using sunlight in your home. The sun puts out harmful ultraviolet (UV) rays that can damage your furnishings over time. Exposing your skin to too much sun can also cause skin cancer and sun spots and make your skin look aged sooner. The UV rays fade fabrics and fade and peel furniture, as well as other harmful elements to your furnishings.

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Lighting affects our lives in many ways, such as our moods and our ability to see. It allows us to perform daily activities and provides warmth and attractiveness to our homes. Studies have shown that the colors from lighting cause psychological changes in our moods and personalities. Colors can be divided into two categories, warm and cool. Red, yellow and orange are considered warm colors; whereas blue, green, violet and indigo are cool colors.

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- Red is considered a color of power, danger, fire, strength, passion, boldness, aggressiveness, excitement and warmth. Red demands attention.
- Yellow is considered friendly, happy, warm and sympathetic. Yellow denotes sunlight, prosperity, cowardice and wisdom.

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- Orange can be used to express creativity, hopefulness, cheerfulness, hospitality, courage, energy and warmth. This color is less aggressive than red.
- Green represents nature, fertility, growth, good luck and envy. Green is refreshing, friendly, cool, peaceful and hopeful.

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- Blue symbolizes calmness, water, peacefulness, cool, quietness, tranquility, serenity, formality. Blue is soothing; however, too much can be depressing.
- Violet symbolizes royalty, dignity, drama and coolness.
- Black is mysterious, evil, sophisticated and gives rooms a crisp appearance. Black signifies wisdom and death and may be considered oppressive if used in large quantities.
- White represents freshness, youth, innocence, purity, peacefulness, faith. Small amounts make rooms look crisp and livelier.

You may want to use a color wheel to describe colors.

Activity 1

Supplies:

- 1 bag of mixed dried beans or multi-colored beads
- Some type of small container (a bowl would be fine)
- Pens/pencils
- Handout 1

Ask a few members to volunteer to participate. Pour the beans/beads into the container. (Leave the lights at normal settings.) Have volunteers pick out different colored beans/beads.

Write down the colors on the handout under the first column. Push those beans/beads aside. Dim the lights or turn off a few lights to darken the room. Have volunteers pick out a few more beans/beads, and then write down what colors they look like in the dimmed lighting in the second column. Turn the lights back to normal settings. Compare the color changes in the beans/beads with the light changes. Light will affect the colors of the beans/beads. This is to teach them that under different lighting settings colors are different than in well lit areas.

From Activity 1, the students learned about the color changes in different light settings. This is why we may pick out one navy shoe and one black shoe. (If they are two different styles, you may want to have your eyes checked.) The color given off by lights affects our perception of colors.

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How to Improve Lighting in Your Home

A lot of people think that switching to high wattage bulbs in lamps, fixtures, etc., will put out more light. Well, yes it does put out more light for a little while, but you are wasting energy, taking a risk of blowing an electrical breaker and spending extra money. The only change that you may need to make in your bulbs is the color or type of bulb. Like we discussed earlier, color affects light and light affects color. If you are using a white-coated, 60-watt bulb, you may think it is working fine. If you want to add light, you should use a clear, 60-watt bulb. Why? The color and coating of the bulb change colors, diminish light and disperse the light differently. With a clear bulb, the light reflects directly off the glass and evenly disperses the light throughout the room. With a coated bulb, the coating catches the electrons and rays of light and disperses them in a smaller area, which is known as diffusion. That is why the coated white lights look dimmer in some rooms than in others.

If coated bulbs are used, you have to replace them more often, use higher power wattage to get more light and use more energy in the process. The coated bulbs also turn black after a certain amount of time, which causes them to disperse less light. The clear bulbs use about the same amount of energy, are hard on the eyes because of the overall brightness and may get hotter than coated bulbs. As we age, our eyes become very sensitive to light, so if a light is too bright it's not really serving it's purpose. Other drawbacks of the clear bulbs is that they break easily and tend to shatter easily.

You may also want to change the type of lighting. There are three main types: incandescent, fluorescent and halogen lighting. With any type of bulb, you should always handle it with care. Let the bulb cool before replacing to prevent injury.

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Light Sources

1. **Incandescent sources** – Incandescent lights are bulbs we use everyday. The best way to use them is through indirect lighting. By using indirect lighting, you position the lights so they reflect off the walls and ceiling. Indirect lighting is much better on your eyes and helps prevent glare.

2. **Fluorescent sources** – Fluorescent lights are usually used in office settings, in commercial areas and to add extra task lighting. The colors given off by fluorescent lighting have a bluish tint and add dramatic changes to colors. Fluorescent lights usually last longer than incandescent bulbs, are easy to replace, use less energy and put out more light.
3. **Halogen sources** – Halogen lights are mercury vapor gas lamps that are expensive, usually very large and most often used in commercial settings. The halogen lamps last longer and put out large amounts of light but do not use as much energy as most lights. One of the most important issues with halogen lighting is that you cannot touch the bulb with your hands. The oils in your skin destroy the vapor gases inside and completely destroy the bulb. When putting in these bulbs, you always have to use gloves or a cotton cloth to keep from destroying it.

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To make a room look larger, use light colors in your décor (the lighter colors do not absorb as much light as the darker hues), use mirrors (which also reflect more light) and place fixtures where they are needed the most. The main fixture in the room, which is usually centered, needs to be the brightest. This fixture needs to disperse light throughout the room, and then you can add extra lighting where it is needed. Another way to add lighting is to let it reflect off the walls and ceiling by using indirect lighting. Position your fixtures in upward or downward positions. The light will fill that area as well as disperse into other areas of the room. Extra lighting is needed in work areas, dressing areas as well as storage areas. In the kitchen, you can place lights above, underneath and inside countertop spaces. In the bathroom area, extra lighting is needed in bathing areas, in linen closets and in the vanity areas. So, as you can see layering and decorative elements of lighting can be useful throughout the home.

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If you think you may want to install more lighting in your home, make sure you work with a licensed electrician to plan your improvements (you may want to consult with an interior designer). Use the most energy efficient lighting systems. If you install new lighting, use an adequate number of switches by all entryways and where they are accessible. You can save energy by using natural light, using fluorescent bulbs, using the right wattage in your fixtures, turning out lights when you are not using them and by not buying the most expensive bulbs on the shelf. The one dollar four pack at the dollar store may work just as well!

Activity 2: Lighting Bingo

(You may want to allow extra time for this activity.)

Instructions:

Give each participant a few beans (or something to cover the spaces with) and a LIGHT card/sheet. (There are two different cards/sheets so that everyone will not have the same one.) Call out the letter and a word for each column under LIGHT. (The game is basically the same as original Bingo game, except you are using the word Light and the words relate to light and the lesson. Once a person has filled a whole row (up, down, across, diagonally, four corners and center space (LIGHT)), this is considered a LIGHT. You may want to use prizes and make sure to congratulate the winners. Make it fun!

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Conclusion

We have learned new ways to improve lighting in our homes, energy efficient products to use and the most economical products to choose. We can always change the décor of our homes, remodel, add extra lighting and make other improvements, but it is not as easy to replace our vision. Think twice: Am I using enough light? Should I use a different type of bulb or lighting? Is this the most energy efficient and economical product to use?

Allow the group to ask any questions they may have or discuss other ways of improving lighting in the home.

References: Personal interview and information from James K. Johnson, Master HVAC and Master Electrician, owner and operator of Johnson Heating and Air, Pine Bluff, AR