



## *Delamping*

In most of our classroom light fixtures, there are one to four individual fluorescent lamps. Depending on the types of fixtures, you can remove one of the lamps while keeping the others in. Which one to take out simply depends on which appears best to you. On the newer, skinnier (T-8) lamps, the manufacturer recommends that no more than one lamp be removed from the fixture. Delamping is a simple way to reduce foot-candles of light intensity in an area. In the lighting industry, foot-candles are a common unit of measurement used to calculate adequate lighting levels of workspaces in buildings or outdoor spaces.

Some overhead light fixtures are also emergency lights that will stay on when the building loses power. The emergency light fixtures should not be delamped. Delamping should be done by qualified staff only. Keep in mind these rules for delamping:

- Do not compromise health, safety, or security.
- Do not take lamps out of new fixtures that are still covered under warranty.
- Do consider the needs of the building occupants.
- With T-8 systems, do not remove more than one lamp per fixture.
- Maintain recommended minimum light levels. Refer to the chart on the next page.





## Where would you delamp a light fixture?

Delamping is possible anywhere there is a fluorescent light fixture above an area that is not being used for active reading and writing or in areas where there is more light than needed. This could include the following areas:

- Classrooms
- Along windows
- Around doors, corners, and coatrooms
- Over computers, televisions, and equipment
- Over play areas
- On desk surfaces for reading (30 to 50 foot-candles required)
- Hallways and stairwells
- Around windows, skylights, and corridors
- off the main hall, hallways should have 10-20 foot-candles.

Light meters are available for loan to school-based Sustainability teams from the Division of Sustainability and Compliance, SERT program. Email: [sustainability@mcpsmd.org](mailto:sustainability@mcpsmd.org) or call 240-314-1090.

RECOMMENDED LIGHT LEVELS		
AREA	LEVEL	NOTES
Corridors and stairways	10-20 FC	As low as 10 FC for high-reflectivity flooring and walls (white or pastel) and up to 20 FC for dark-colored flooring.
Conference rooms	40 FC	At table height
Reception – seating area	30 FC	For average ambient lighting
Reception – desk	50 FC	For task surface/desk
Standard classrooms	40 FC	For reading and writing
Art classrooms	50 FC	Natural lighting is preferable
Computer labs	30 FC	
Restrooms	10 FC	
Gymnasiums	50-75 FC	(ES & MS = 50, HS = 50-75)
Cafeteria – seating area	40 FC	
Cafeteria – food prep area	50 FC	



# Customized Classroom Lighting

When a lighting system is designed, the entire floor area is usually covered end-to-end with an equal amount of light. When we customize the lighting, the idea is to put light where it is needed, and delamp where light is not needed.

There are no standard rules for customizing classroom lighting. Flexibility is the key. Every teacher will set up the classroom to meet their style and methods. Furthermore, every teacher will need different levels of lighting for comfortable vision. Customizing works best when the teacher and the building service manager work together to find the best solution.

To identify delamping opportunities in his school, one building service manager came up with the idea of mounting cardboard on a pole in order to block out the light from a light fixture to simulate what it would look like by delamping. That way, he could go around the classroom with the teacher and select specific fixtures to delamp. The teacher could see how the classroom would look without any guess work.

You can delamp easily over doors, computers, televisions, and in storage areas. Keep the lights over the study areas where students will be reading and writing at about 30 foot-candles. An added benefit of delamping is that when conditions change, lamps can easily be replaced by in-house staff.

Young, healthy eyes are able to adjust to a wide range of light levels without difficulty. As people age, their eyes become less flexible with varying levels of light and detailed work becomes harder. Keep this in mind as you ask teachers to delamp. Lighting levels that are appropriate for one person may be unsuitable for another. Consider task lights with compact fluorescent bulbs (CFL) at work areas to increase light levels at the work surface. Lighting consumption after regular school hours can be greatly reduced if teachers switch off overhead lighting and rely on task lighting, like a desk lamp. For good measure, equip that lamp with a CFL rather than an incandescent light bulb. Energy efficient lighting design today should be about 1.5 watts per square feet. With modern technology, that could come down to 0.9 watts per square feet.

