

# How Can NaturaLux™ Filters Enhance Scholastic Performance?

# Teaching TODAY!

In addition, our teachers are also faced with:

- Grading homework
- Fundraisers
- Progress reports
- ARD forms
- Absence notes
- Schedule change forms
- Field trip requests
- Receipts, etc., etc., etc.



# School Staff Responsibilities

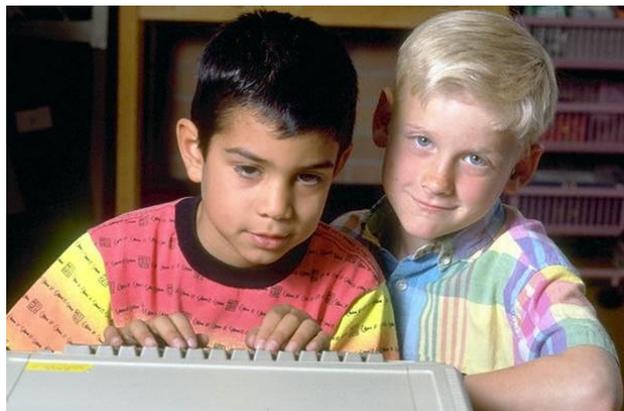


- Improving test scores
- Improving behavioral issues
- Improving health and safety issues
- Improving ROI (energy savings)



# Classroom Lighting

- Lighting is a MAJOR factor in the brain's ability to focus
- Poor lighting can reduce how effectively the brain collects information
- If the pattern of learning under poor lighting persists, the brain can become slower at absorbing new information



# Lighting and Preschoolers

- The physical environment plays an important role in the lives of preschoolers.
- It can add an important dimension to a child's learning experience and development when the physical environment is carefully and thoughtfully arranged.



# Lighting the Preschool Class

- Lighting should promote a soft visual appearance.
- Proper lighting can create a setting that is cozy, comfortable, cuddly, and homelike.
- Optimized lighting will bring out the colors, textures, shades, hues, and other elements that add to the child's learning experience.



# Preschool Environment

The physical environment and curriculum together enhance and support the child's ability to:

- Initiate and complete activities
- Take control of their own actions and responsibilities
- Communicate and interact with others easily
- Have better perceptual and motor skills.



# Proper Classroom Lighting



- Poor lighting affects a student's ability to read accurately on paper, a whiteboard or computer display.
- Lighting is also a factor in psychological health when a person is in one room for the majority of the day
- Spending a significant amount of time under sub-standard lighting can negatively affect mood.



# Off Task Behavior

Studies have found that sub-standard fluorescent lighting contributed to off task behavior such as:

- Daydreaming
- Playing with objects
- Talking with others



# The Color Temperature of Light

- “Cooler” means the light appears to be bluer, like the color seen in the mid-day sky (5000K)
- “Warmer” light refers to a more orange color of light, as we see in the late afternoon and early morning sky (3500K)



# Full Spectrum Light in the Classroom

- A recent university study shows that students, under higher color temperature lights (>5000K) displayed better visual acuity than those same students under lower color temperature (3500K) lights.
- The same study also found that students required about half the number of light bulbs under the 5000K bulbs than when under 3500K bulbs, resulting in energy savings of about 50%



# Full Spectrum Light in Class

- A study showed a 26% increase on reading tests and a 20% increase on math tests in a Capistrano, CA school
- The study further showed a 7% to 18% increase on standardized tests in both Ft. Collins, CO and Seattle, WA schools



# Lighting College Classrooms

- Whether sitting in a large lecture hall, underneath a tree, or in front of a computer screen, students are engulfed by environmental information.
- Specific targets within the environment draw the students' attention, such as chairs, posters, lighting, etc.
- In any learning environment students are awash in environmental information, only a small fraction of which constitutes the sights and sounds of instruction.



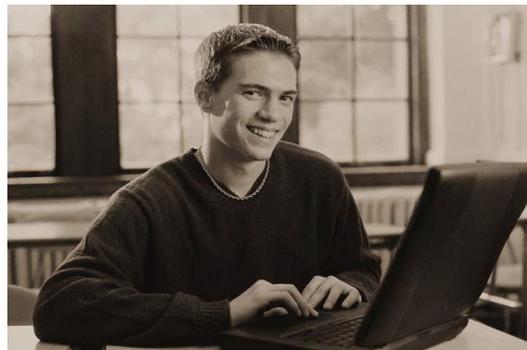
# College Classroom Environments

- Studies show that the physical characteristics of learning environments can affect learners emotionally, with important cognitive and behavioral consequences.
- Environments that elicit positive emotional responses may lead not only to enhanced learning; becoming a place where students love to learn.



# College Classroom Considerations

- Learning appears to be affected adversely by inadequate light, extreme temperatures, and loud noises.
- The lighting must be bright enough for general tasking, but not too bright for computer use.
- Glare control is essential.



# The Best Lighting

- Numerous studies have shown that the best lighting possible is as natural and soft as possible. (Hint: The bluer the light, the *truer* the light)
- The light needs to be bright enough to perform given visual tasks, but not too bright
- Overly bright, glary light contributes to headaches, eyestrain, visual fatigue and causes heightened hyperactive behavior



# How Can NaturaLux™ Filters Enhance Scholastic Performance?

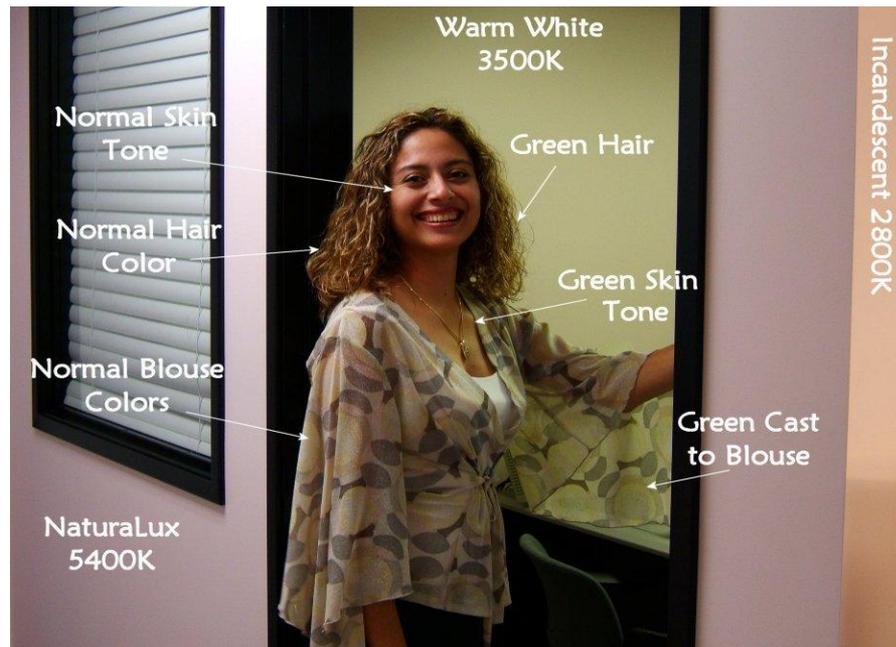
**NaturaLux™ Filters** perform four key functions when using fluorescent lights:

- Enhances the color temperature and color rendering abilities of ordinary fluorescent lights
- Absorbs harmful UV rays emissions
- Eliminates the glare that causes headaches and eyestrain
- Spectrally enhances the light so your eyes can perform the same tasks with fewer bulbs and less light.

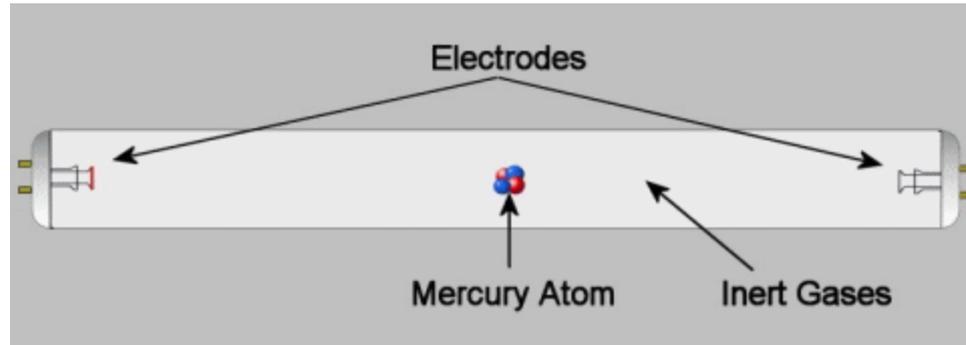


# Improves Color Rendering

- Color corrects ordinary, inexpensive fluorescent light to provide full spectrum light
- Allows TRUE colors to be seen indoors



# Absorbs UV Rays

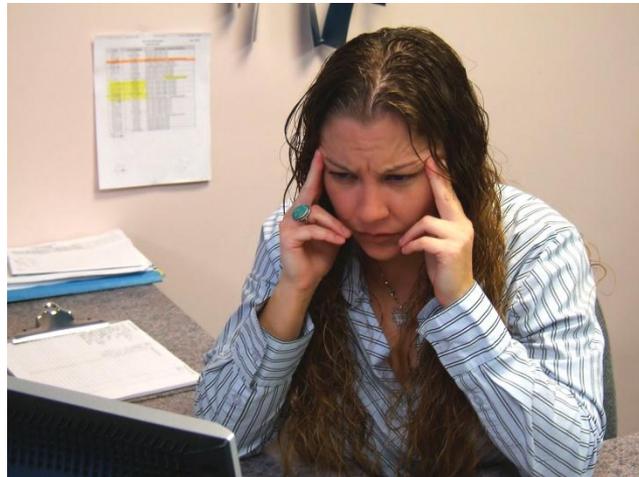


- NaturaLux™ Filters absorb 100% of UVB and UVA up to 380nm. Overall, they absorb 98% of all UV rays
- UV can cause health issues (especially for Lupus patients), and also causes fading of furniture, papers, photos, etc.



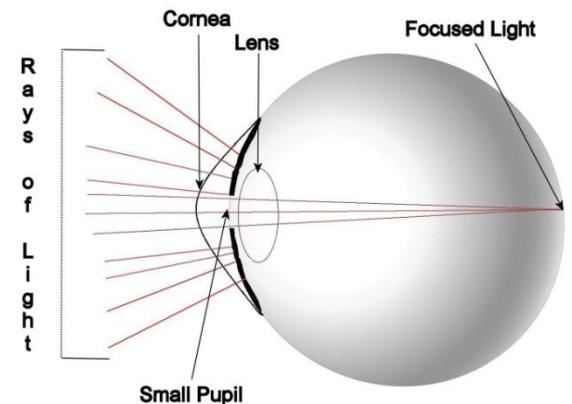
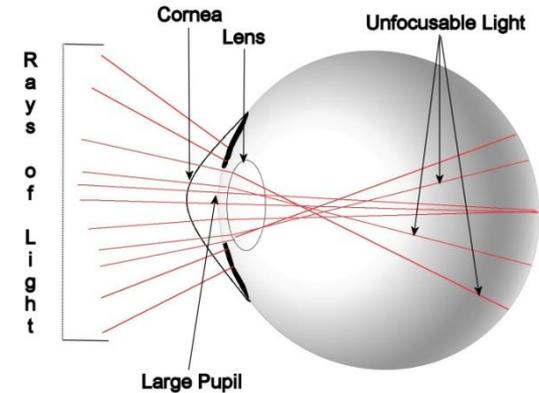
# Eliminates Glare

- Glare is the result of an over-abundance of light. Remember, “*Glare* is to light, as *Noise* is to sound”
- Glare is the cause of headaches, eyestrain, and visual fatigue



# Spectrally Enhances Light

- Spectral enhancement of light means that we alter the color of light to affect the eye in such a way as to cause the pupil to slightly constrict, so that it increases your depth of field and causes your eye to work smarter, not harder.



# To Summarize...

- NaturaLux™ Filters create a visually soothing, yet mentally-stimulating light source in the classroom
- NaturaLux™ Filters protect teachers and students alike from unwanted UV rays
- NaturaLux™ Filters eliminate all of the performance-robbing classroom glare
- NaturaLux™ Filters provide students with vibrant, accurate colors in the classroom



# Questions/Answers

