Washington State Department of HEALTH

Guidance for Lighting in Classrooms

Background

Classroom lighting is important to a student's learning environment. Studies indicate that the correct light intensity has a positive impact on student performance, behavior, and wellbeing.

Schools are required to maintain minimum lighting levels to control excessive brightness and glare in classrooms and other instructional areas (WAC 246-366-120).

This guidance explains how to meet required lighting standards and offers recommendations to support a positive, well-lit learning environment for students.

Minimum Light Intensities

Location	*Foot-candles	Description
Non-instructional spaces like hallways and restrooms	10	• Lower intensity lighting. • Enough to ensure people can walk safely.
Gyms and locker rooms	20	• Moderate lighting. • Suitable for general, non-detailed activities.
Classroom	30	• Good lighting. • Suitable for reading and computer work.
Classrooms with a higher safety risk	50	• Bright lighting. • Suitable for sewing and activities in a woodshop or chemistry lab.

*A foot-candle is the measurement of the brightness of a surface.

Tips for Classrooms

- Do not cover lighting without your school or district's approval and fire marshal approval. Maintain documentation of any fire marshal approval. Light covers are generally not recommended because they:
  - May reduce the amount of light below an acceptable level.
  - Can change the color of light and may not be conducive to learning.
  - May not meet fire or electrical standards, even if commercially sold.
  - May collect dust and are rarely washed.
  - May impede inspection, servicing, and maintenance of light fixtures.
- Lighting levels may be adjusted in some cases to support students with special needs, but lighting must meet requirements when students need to read or do similar tasks.
- Do not permanently cover windows. WAC 246-366-050 states "no student shall occupy an instructional area without windows more than 50 percent of the school day."
  - Blinds or window shades may be adjusted as needed to control glare or heat.
  - Natural light enhances student learning, comfort, mood, and helps set circadian rhythms that affect sleep quality.
  - Windows may be covered temporarily during an emergency. Coordinate with the school administration for safety issues.
- Work with your school and fire marshal before adding string lights. They should not:
  - Be plugged into an extension cord. Fire codes may restrict their use.
  - Pose a trip hazard.
  - Be linked together in a continuous chain.
  - Be used as the only source of lighting.
  - Distract from student learning. Lights should not flash or blink.
- Ideal classrooms have windows on one exterior classroom wall.
  - Students should be parallel to windows. They should not face towards or away from windows.
  - Make sure students can see through windows to the outside. Do not frost windows or apply any material to glass that reduces window transparency.
- Classroom lighting should be bright enough for students to see the instructor and presentation materials, including work surfaces, desktops, and whiteboards.
- People exposed to fluorescent lighting for extended periods sometimes report symptoms such as headaches, dizziness, or eyestrain. If light covers are used, ensure they:
  - Are authorized by your local fire marshal.
  - Are authorized by your school or district.
  - Keep lighting at 30 foot-candles or higher in classrooms.
- Consider using task lighting, if allowed by your district, for learning spaces that need increased lighting levels. Ensure portable lamps and electrical cords do not cause a safety or trip hazard.
- A professional grade light meter is needed to accurately measure light intensity. However, a phone app can estimate lighting foot-candles.
- Your Local Health Jurisdiction (LHJ) may use a professional grade light meter during school inspections. You may contact them for assistance.
- Measure light levels 30 inches above the floor. This is about the height of a student or teacher's desk.

Resources

- Minimum foot-candle intensities are found in WAC 246-366-120.
- Window requirements for instructional areas are found in WAC 246-366-050.
- ANSI/IES RP-3-26 Recommended Practice: Lighting Educational Facilities
- Department of Energy K-12 school lighting toolkit
- Common Vison Problems in Children | CDC
- Childhood Myopia (nearsightedness) - American Academy of Ophthalmology

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