
Opening Windows in your school

From : Gary Heldt <heldt@4j.lane.edu> Sun, Mar 28, 2021 02:12 PM
Subject : Opening Windows in your school
To : Deirdre Pearson <pearson_d@4j.lane.edu>
Cc : Allan Chinn <chinn@4j.lane.edu>, Karen Ramirez Gutierrez - El Camino del Río Principal <ramirezgutierrez_k@4j.lane.edu>, Erin Gaston <gaston_e@4j.lane.edu>, Chris Mitchell <mitchell_c@4j.lane.edu>, Larry Williams <williams_l@4j.lane.edu>, Peter Barsotti <barsotti_p@4j.lane.edu>, Courtney Leonard <leonard@4j.lane.edu>

Hi Deirdre,

One of your custodians, Anita, ask me to email you after she and I discussed teacher's requests to open windows.

In terms of HVAC (heating, ventilation, air conditioning) generally it is fine for teachers to open classroom windows in this time of Covid, as long as it doesn't cause kids next to windows to be thermally uncomfortable, or create a safety issue. It is the latter that was of concern for Anita, as apparently it is common for folks from the surrounding homeless camps near Chavez to come on campus from time to time and even appear in the windows, some of which no longer have screens in good shape. Anita suggested sharing some information about the mechanical ventilation systems in your building that I shared with her last week, in hopes teachers will be less inclined to open windows given safety concerns.

Although it is generally not a problem to do so, in the eight new schools we've constructed in the last two decades (Chavez, Holt, Howard, River Road, Cal Young, Madison, Roosevelt, ATA) there is little to no real benefit to opening windows. There is, of course, a psychological benefit of seeing a fresh air path directly, which I know is important to some. It is important to recognize that with pollen and dust in the outdoors, open windows may create some air quality problems beyond thermal discomfort (including bugs if screens are damaged).

Each of these 8 new buildings is designed with a single, dedicated HVAC system *per classroom*. This means no air is ever shared between classrooms. Each fan-powered system provides a *substantial* volume of air to its classroom; more than would be provided via open windows on even a mildly breezy day. The supply air is evenly distributed via the four supply air diffusers in the ceiling. With the pandemic, we have re-programmed all our web-based HVAC controls so that all our systems will provide much, much more fresh air than normal code-required ventilation. In fact, the goal is to provide as much

fresh outside air as practical, exhausting the air that is drawn out of the room as new air comes in.

A portion of the air that is drawn out of the room may be recirculated when it is quite cool outside, depending to the heating capacity of the building's boiler plant. Any recirculated air is simply a return of some of the air that was already in the room, blended with new outside air, filtered, heated or cooled if necessary, as well as passing through a new bipolar ionization air cleansing unit before being delivered to the space. As the outdoor temperature increases throughout the day, the systems automatically recirculate less and less, while provide more and more fresh outside air until the dampers are providing 100% outside air. I will be monitoring your building careful this week, making adjustments as needed to automatically provide as much fresh outside air as we can without causing thermal discomfort.

Hope this info is helpful.

Gary Heldt, PE
District Engineer
Facilities Management
Eugene School District 4J
715 W. 4th Avenue
Eugene, OR 97402
541-790-7422
cell 541-870-5882
