

### To meet air quality standards

each cubic foot of air needs to be replenished **6 times an hour.** (ASHRAE)

# 1hr x 6 cycles x 8,100 cu ft<sup>1</sup> = **48,600** cu ft of air/hr

circulating in the classroom

#### **Contaminants in the Air**

Cleaning Product O-Gassing Volitile Organic Compounds Carpet and Tile Chemicals Combustion Gases Dust Mites Asbestos Viruses Molds



#### Minimum occupancy standard

A recent study concluded **18 students** and **1 teacher** must have **900 sq ft** in an average elementary school classroom and **1,216 sq ft** for secondary schools.<sup>2</sup>



### Indoor air pollution

is **2x to 5x higher** than outdoor levels.

#### **Open windows**

provide **1/10th** the ventilation effectiveness to that of a proper HVAC system.

# Air filter requirements

The standard recommended rating for air filters is **MERV 13 or higher**. Many school HVAC systems will need to be upgraded to operate effectively at this level.

1 900 sq ft classroom x 9 ft ceiling

2 Minimum Classroom Size and Number of Students Per Classroom: by C. Kenneth Tanner The University of Georgia School Design and Planning Laboratory April, 2000 Revised Findings and Conclusions: September 1, 2009

www.modinehvac.com