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Assignment 5: Air & Thermal Comfort Reflections

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I feel very good about the air quality in my house. In the last 1 ½ years I had a brand-new double HVAC system put in that is efficient and well made. I first had to change a great deal to put a new system in. There is only one unit in my basement to heat and cool the entire house. LBA added new ductwork that extends from the basement to the attic. This helps the air flow to the second floor. There were new vents put in every ceiling in all rooms upstairs. Then afterwards they lined up all airducts so air would not seep out of the ventilation system. I had new insulation added to the unfinished attic and in the basement on the upper top of the ceiling. All these things had to be done for the air flow to be efficient and move up from the system. They put in a Merv air filter that helps fight pollution such as dust particles, pollen, fungi, mold, pet dander and virus size particles. The system has an ultraviolet lamp which are used in HVAC systems to kill bacteria, viruses, mold, spores, fungi and other microorganisms as they pass through the air handler system. UV light damages the DNA/RNA of microorganisms, making them harmless. LBA comes every year and checks and makes sure all systems and air flow are running properly and if not, I get them to repair what is needed. There are adjustments I will make in the future such as radon testing and air quality testing. I do not know what the air is rated in the house but I am doing everything I can to improve the air quality. There are carbon monoxide and gas detectors set up throughout the house. Breathing in these fumes causes carbon monoxide to replace oxygen in the red blood cells. This prevents oxygen from getting to tissues and organs. This can lead to serious tissue damage or even death.

My smart eco thermostat lets me know when my MERV filter needs to be changed. MERV stands for Minimum Efficiency Reporting Value. It calculates the effectiveness of an air filter in capturing particles. This was developed by the ASHRAE Air-Conditioning Engineers in 1987. Particles are measured in microns and MERV ratings range from 1 to 16. My air filter is MERV 13, so it is efficient based on the range. 16 being the most efficient. This helps consumers and professionals make well-informed decisions.