

This document is to provide understanding of how the ventilation system at Garfield Elementary functions, and how it will operate during the COVID-19 pandemic. It is based on strategies from the "District Wide" plan to minimize COVID-19 risk. Maintenance staff inspected every room and all HVAC components of this building. Included in this document is a summary of the ventilation system, how the ventilation will operate during COVID-19, key action items for staff, and detailed space specific ventilation descriptions and instructions.

Summary of Garfield's Ventilation System

- All classrooms have individual ventilation systems that supply fresh outside air and filter existing air before circulating. Air circulates through the room, is then drawn into ducting and exhausted outside by a fan on the roof. Air is not shared between classrooms.

Ventilation Operation During COVID-19

- The maximum supply of fresh outside air allowing for 70°F will be used, beginning 1 hour prior to students arriving and end 1 hour after students leave. The temperature and air mixture is controlled remotely by facilities. The fan is controlled in the room. Staff should always have the fan on.
- The building temperature will be kept at 68°F minimum 3 hours before and after students are present. This is controlled remotely by facilities.
- To increase ventilation, ventilator fans can be set to "high", doors and or windows can be opened. This can be done during breaks to accelerate ventilation with minimal disruption to "Flush" the room.
- Windows in the modular classrooms should be opened 3 inches to increase ventilation.
- HVAC filters have been upgraded to MERV-11.
- Maintenance staff will inspect equipment for proper operation twice per month.

Key Action Items for Staff

1. **Masks:** Wearing masks is the single most effective measure for air quality in the school during the COVID-19 pandemic, followed by the operational blueprint, and then HVAC ventilation measures (See Corvallis School District COVID-19 Air Quality Plan - District Wide).
1. **Fan On:** Staff commonly turn the unit ventilators fan off in classrooms because of noise or temperature. Unit ventilator fans must always be on to supply fresh outside air, and circulate air in the room, even in warmer temperatures when cooling is being used.
2. **Keep Clear:** To ensure proper ventilation HVAC equipment such as vents, heaters, fans, and radiators should not be obstructed, or have items stored on or within 2ft.
 - a. Exhaust vents above coat racks: Do not block with items on the shelves.
 - b. Classrooms have unit ventilators under the windows. Ensure items are not obstructing air flow, in front of, on or within 2ft of the unit ventilator.
3. **Small Enclosed Spaces:** Small enclosed spaces with poor ventilation where a person remains unmasked for extended periods of time can be higher risk for aerosolized COVID-19. Staff should increase air circulation by opening windows, doors, reduce the number of people utilizing the space, and ventilate for 20 min between users.

- a. Campus Stewards Office
- b. Principal's Office
- c. Modular Classrooms

Detailed Space Specific Ventilation Descriptions and Instructions

- **Classrooms:** These classrooms have their own HVAC unit located underneath the windows. Fresh outside air is drawn in from directly outside, filtered, heated if needed, and then blown into the room. The air moves around the room, is drawn back in through a vent at the bottom of the HVAC unit, mixed with the fresh outside air, filtered, and then recirculated. Air is exhausted through vents above the shelves next to the hall doors. Air also vents through doors, windows and leaks in the building construction. The fan on these units is designed to run at all times to circulate air. If additional outside air is desired, the most effective method is to increase the fan speed. Opening doors, windows, and turning on the ceiling fan can be done to increase ventilation as well.
- **Temp Office:** Same as classrooms.
- **Temp Staff Room:** Same as classrooms.
- **Gym:** Air is drawn in from outside, filtered, heated, and then distributed to the gym through vents in the ceiling. Air circulates around the room, then is drawn into return vents near the floor. Part of the air is exhausted outside and the rest returned to the supply, filtered and recirculated. If the gym is to be used for physical activities or by more than 15 people, Facilities should be notified to increase the percentage of outside air.
- **Cafeteria:** Same as gym.
- **Hallways:** Air is drawn in passively when doors are opened and then passively exhausted outside through doorways.
- **Restrooms:** Exhaust fans draw air from the doorway, through the space, and then exhaust outside through ductwork to the roof.
- **Kitchen:** The kitchen air is supplied by doors, and windows. It is exhausted outside through the hood fan above the stove, doors and windows.
- **Modular Classrooms:** Each modular classroom has its own individual ventilator located on a wall outside. Air is drawn in from directly outside, heated, and then blown into the room. The maximum amount of outside will be set manually by Facilities. The air moves around the room, then vents outside through doors and windows or is drawn back into the ventilator, heated, and recirculated. During the pandemic, two windows should be opened three inches to increase ventilation. District approved portable air purifiers will also be provided by Facilities.