Reopening Plan

July 2020

Table of Contents

Introduction and Overview

Homestead School is a Montessori-based day school serving children ages Preschool through 8. It was established over 40 years ago on a 85 acre homestead and is now a fully developed school campus with four academic buildings. Homestead School provides child-centered learning with a focus on experiences of environmental stewardship and humanitarian service to all our students, from our youngest in our early childhood program through our oldest in the middle school.

This document is designed to assist in planning for the safer reopening of Homestead School for the 2020-2021 school year. We recognize the importance of returning students to school campus for in-person instruction, as well as the overarching need to protect the health and safety of our students, school staff, families, and broader community. The goal of this document is to offer a plan for and to implement measures to reduce and prevent COVID-19 transmission in the school setting, while meeting the physical, emotional, and educational needs of all students.

Early decisions on school closure by public health experts around the country were based heavily on knowledge and experience with influenza, a disease for which school-based transmission is a significant factor in community-wide spread of disease. While scientific data for COVID-19 is still limited, published studies suggest that the epidemiology of COVID-19 is distinct from that of influenza. Specifically, studies suggest:

- COVID-19 disease prevalence among children is lower than in adults, and children who contract COVID-19 are more likely than adults to be asymptomatic or to have very mild symptoms.
- Multisystem inflammatory syndrome in children (MIS-C), a severe condition associated with COVID-19, remains rare.
- Furthermore, in several studies, children were less likely to be the first case within a household, suggesting that child-to-adult transmission may be less common than adult- to-child transmission.
- In other countries, where schools remained open or have recently reopened, cases in schoolchildren have been associated with few secondary cases in the school, suggesting that child-to-child transmission may also not be as significant as with influenza.
- Analysis of data broken down further by age shows that these trends are seen more in younger children compared to teenagers, whose disease patterns more closely parallel those of adults. These key findings have important implications for how we think about infection risk and play an important role in guiding our recommendations for preventing transmission in schools. Specifically, these findings suggest that COVID-19 transmission in schools is likely to be less widespread than influenza transmission, that adult-to-child transmission is greater than child-to-child transmission, and that transmission risks among younger children appear to be lower than older children.

Education, just like healthcare and food provision, is an essential service in our community, and as such, the reopening of school campuses for in-person instruction with strict safety protocols should be prioritized. Disruption of normal childhood social interactions also have a profound adverse impact on students' social and emotional well-being.

As Homestead School prepares to resume in-person instruction, we are also putting in place a plan for remote instruction for students who may need to isolate or quarantine, as well as students who are medically vulnerable or who have a household member who is medically vulnerable. Homestead School is also prepared for the possibility of partial or full school closure, either short-term or for a longer period.

Section 1: Physical Distancing

1. Social Distancing, Face Covering, and Space Configuration

Homestead School plans a full return of the student body with safety measures, using a cohort model. Homestead School has implemented and will continue to implement a variety of adaptations to meet State and local health requirements for a safe reopening of the school.

Social Distancing

Homestead School faculty, staff, and administration will ensure that appropriate social distancing (minimum of 6 feet in all directions) is maintained between individuals while in school facilities and on school grounds, inclusive of students, faculty, and staff, unless safety or the core activity (e.g., instruction, moving equipment, traveling in common areas) requires a shorter distance or individuals are of the same household.

Cohorts:

Homestead is using a cohort model, with 11 cohorts, each comprising a class ranging from 12 to 25 students. Within each cohort, there are subgroups, and at least two teachers, so cohorts can be split up and spread between the classroom and the outdoors on campus, thereby potentially decreasing populations by 50% for each cohort indoors. Each cohort will have its own locker area and classroom, a specified entrance/exit to their building, and will always have its own designated outdoor play area for arrival, recess, and dismissal. This play area will be rotated weekly or biweekly so all students experience each of our designated outdoor play areas.

Essentially, we have created an arrival, school day, and dismissal system that separates each cohort at all times, except when getting on or off a school bus.

Social Distancing for Certain Activities:

Homestead School does not have gym class but will maintain a distance of 12 feet in all directions when offering aerobic activities. Homestead School is also modifying its Music Program to provide minimal, if any singing activities, shifting focus to music appreciation, instrument usage other than wind instruments, and will ensure that all students, staff, and faculty uphold the 12 feet radius protocol when participating in activities involving projecting the voice or using wind instruments.

Face Coverings

Any time or place that individuals cannot maintain appropriate social distancing, individuals at Homestead School will be required to wear acceptable face coverings.

Homestead School will require all faculty, staff, and students to have an acceptable face covering around the neck at all times. If students do not have their own acceptable face coverings, Homestead School will provide one at no cost to the student or family. Homestead School will have an adequate supply of face coverings, masks, and other required PPE on hand should a student, faculty or staff need a replacement, or a student be in need. Items will be kept with administration to be distributed as needed.

Homestead School will require that all students wear a mask while arriving and departing from school, while in any indoor areas outside of their classroom (hallways, locker area.) Homestead School intends to have mask use be the encouraged practice at this school when indoors, for all grades, even when social distancing can be maintained. Staff and students will be allowed to remove face covering when outdoors while still maintaining appropriate social distancing.

Homestead faculty and staff have created classroom schedules that will allow for regular “oxygen breaks,” daily lessons and activities outdoors. Additionally we have windproof and waterproof outdoor shelters for each student cohort which will allow the students to be regularly socially distanced in an outdoor covered area with adequate ventilation to allow students and staff safer and more frequent “oxygen breaks.” Beyond scheduling regular face covering breaks, each classroom cohort at Homestead School has multiple staff and immediate access to the outdoors which would allow an individual to go outside for a supervised mask break if needed beyond the regularly scheduled group mask breaks. Finally, to benefit from the added safety of the outdoors, Homestead teachers at each level are planning curriculum with an even greater focus on outdoor educational activities.

Homestead School staff will not exclude students from the classroom if they occasionally fail to wear a face covering, or if a few students in the classroom, particularly the early childhood rooms, are consistently unable to wear a face covering, when required. The small increase in risk of disease transmission does not justify classroom exclusion.

If a student or staff experiences difficulty wearing his/her face covering, he or she will be allowed to remove his/her face covering for a short period of time, or more preferably be excused for an oxygen break. Students and staff without face coverings will be expected to maintain physical distancing.

Homestead School has required that all staff, faculty, and students be prepared to put on a face covering in common areas such as entrances, exits, and hallways. We require that each person enter the premises with an approved face covering, that can be kept on the neck so that he or she can easily put up his or her mask when social distancing is not possible. If a person enters the premises without acceptable face covering, one will be provided by Homestead School for his or her time on campus.

Homestead School has multiple entries with virtually one entrance dedicated solely to each of our student cohorts, and does not have common areas such as a cafeteria or gym, which are locations in which mask wearing would be mandatory.

Students who are unable to medically tolerate a face covering, including students where such covering would impair their physical health or mental health are not subject to the required use of a face covering and modifications will be made, such as alternative learning space, alternative schedule that allows all outdoor learning or continuous social distancing.

Homestead School staff will participate in onsite training September 1st, 2nd, and 3rd (before school begins) on how to support students in adapting to wearing a face covering. Training will include language of empathy, helping the student feel comfortable during the time that face covering is mandatory and informing the person about when the next face covering break will occur, and how to gauge whether an immediate break is in the best interest of the person having difficulty.

In this same training, Homestead School administration will train faculty and staff on how to appropriately put on, take off, clean (as applicable), and discard PPE such as face coverings, gloves, gowns, and face shields. Homestead School has gloves, gowns, and face shields available in addition to cloth face coverings and surgical masks that all staff will be trained in adequately using. The Homestead administrator in charge of maintenance will supply any contractor with appropriate PPE as needed and will train them on adequate usage if needed.

Space Configurations

Homestead School has classrooms that can accommodate each cohort while easily observing the appropriate social distancing mandates. (See Appendix 1.)

Cohort sizes were created to be small enough to meet social distancing requirements in each specific classroom. All staff will mark classroom seating to ensure 6 feet of distance between students, and maintain 6 feet from students while giving lessons to prevent adult to child disease transmission. Teacher tables will be placed at least 6 feet from student tables.

Homestead School has dismantled all communal locker areas and moved lockers into each classroom to maintain the integrity of our cohort configurations. Furthermore, Homestead School is suspending the use of the faculty lunchroom. There are no indoor gathering areas for the school on campus. There is one limited use faculty room in the Upper Elementary space with ample social distancing between the teacher tables. The room is only used by the 5 upper elementary staff. All school gatherings will be outdoors for the 2020-2021 school year.

Homestead School is using a cohort model for student groupings. Staff within each cohort will be required to clean tables, shelves, and any shared items on a daily basis at midday, at the end of the day or before student arrival, and additionally during the classroom work cycle as needed. All students are being asked to bring personal items such as a water bottle, a student supply case with pencils, rulers, scissors, and glue to avoid sharing communal materials. As well, on an individual basis, students are being issued core classroom academic materials to reduce the amount of items being shared.

Students and staff are also being asked to bring a pair of slippers or indoor shoes to change into at school to prevent the entrance of germs into the classrooms coming from outdoor footwear.

Early Childhood and Lower Elementary Programs: Homestead School has prioritized cohort stability (no intermingling between cohorts.) Classrooms will have social distance seating markers, and each child will have a mask ready and will be asked to keep it on while indoors. However, given the social and educational needs of this age group, physical distancing or face coverings may be difficult and sometimes inappropriate to enforce. Therefore, strict maintenance of a stable classroom cohort, which minimizes the total number of contacts, is the primary mechanism of risk reduction.

Upper Elementary and Middle School Programs: Homestead School has prioritized social distancing, and face covering with regular breaks, and maximizing the use of personal items in the classroom. Teachers will rotate to cohorts or teach remotely to ensure the varied expertise offered to students, but given this age group's developmental abilities and needs, the two Upper Elementary cohorts will be allowed to intermingle outdoors while maintaining social distancing. The Middle School population is small enough to maintain one cohort with its three core teachers.

Access to Each Cohort Class Area will be through an exterior door dedicated exclusively to that cohort (with the exception of three cohorts sharing one door in the Early Childhood building) thereby taking away the need to form lines in an interior hallway. Cohort lockers are located near these exterior doors and egress will be staggered and masks will be required when in locker and hallway areas. The exception to this access arrangement will be in the Early Childhood Building where three cohorts will be sharing one exterior entrance. However, each of these three cohorts splits off toward its own classroom immediately after the door, and will follow a schedule of staggered entry and exit to take away the need for "lining up", thereby maintaining the distancing protocols.

Homestead School does not have large hallways, or a large student population, or a schedule that would necessitate unidirectional flow. Nor do students ever need to cluster or form a line indoors because there is a door to each classroom and the locker area is located by the door.

Homestead School Administration will post signage and distance markers denoting spaces of six feet in front of bathrooms and in classrooms as appropriate to classroom configuration. Homestead School will also post signage and distance markers in our health screening areas that are not outdoors.

Buildings on Homestead School's campus are not open to the public, and are for student, faculty, and staff use only. Homestead only has staff on campus that are necessary, and has ample space for its faculty and staff to implement proper social distancing.

Our campus of 85 acres and its facilities are spacious enough, and with the availability of a windproof and waterproof outdoor shelter for each cohort within a short walking distance, Homestead School does not have a need to utilize other alternative spaces beyond the campus to accommodate appropriate social distancing during in-person learning.

2. Schedules and Signage

Schedules

Arrival will be from 8 am - 9 am and dismissal will be from 2:30 pm - 3:15 pm, allowing for staggered arrival and dismissal. Cars will be parked, parents will be asked to remain at their cars, and staff will be there to greet the children and walk them to the appropriate health screening station. Students arriving by bus will be greeted and sent to their appropriate health screening station. Because we are following a cohort system, each cohort has a locker area in their classroom and personal items are stored there. For older students who have textbooks and notebooks, these children have personal cubbies in their classroom.

Signage

Homestead School administration will print and post the appropriate posters given by CDC, DOH, and school districts in each classroom, bathroom, and in hallways and near entries/exits. (See Appendix 2.)

3. Limiting Gatherings, Ventilation, Movement and Commerce

Limiting Gatherings

Transportation:

Homestead School does not provide transportation, but receives students from various districts who are creating their own protocols consistent with state-issued guidance. All students who arrive and/or leave in cars will be escorted to and from their cars by Homestead staff. All students who arrive and/or leave in buses will be escorted to and from their buses by Homestead staff.

Meals:

Homestead School does not have a cafeteria and has suspended use of the staff lunch room. All students previously have eaten in their classrooms or outdoors on campus and will continue to do so (in their cohort) while maintaining 6 feet separation while consuming their meals. All teachers will now eat with their classes with appropriate social distancing. Homestead School does not provide food for individuals. Students, faculty, and staff bring their own lunch and will be asked to bring their own snack in order to decrease communal situations and sharing of items. To ensure each student's safety, at the September Staff Inservice, Homestead School staff will be provided with a food allergy list of all students in the school to keep in a place that teachers can easily refer to in the classroom while maintaining confidentiality. This has been a practice at Homestead for years and will continue to be as students eat under the supervision of their teachers.

Homestead Staff will be trained in proper hand washing techniques and will teach students to wash their hands for at least 20 seconds and rinsing with warm water before and after eating. Posters will be

displayed by each sink as a reminder, and staff will ensure that each member of their cohort is following this policy. In the first days of reopening, staff will also discuss with students how sharing of food and beverages promotes spread of germs, and will monitor the students to prevent the sharing of food or beverage.

Extracurriculars:

Homestead School will not offer extracurricular (after school sport or group) activities in the 2020-2021 academic year.

Before and Aftercare:

Homestead School does not provide before or aftercare.

Small Spaces:

The only small spaces on Homestead's Campus are the two copy rooms. All students, faculty, and staff will be required to wear appropriate face coverings while in these spaces unless by themselves, and will need their face coverings available if another person were to enter.

Faculty and Staff Meetings:

All-Staff meetings will be video meetings, outdoors, or in the open air barn with appropriate social distancing and ventilation. Any meeting of staff outside their cohort, such as building meetings or smaller meetings with administration will be either by video, outdoors, or in the barn or another well ventilated area with appropriate social distancing. Staff will be asked to consider the comfort level of each participant in the meeting and will implement the additional precaution of using a face covering as deemed necessary in that regard.

Ventilation

Direct Ventilation

Homestead school has always used open windows for ventilation and will continue to do so. Administration will inform staff to further ventilate with open doors as much as possible, while maintaining health and safety protocols.

Heating Systems and Ventilation:

Many of the buildings have radiant floor heating. Those buildings which have forced air oil-fired furnaces will have the furnace air return grill blocked so that interior air is not recirculated. Each furnace room has access to outdoor air for the safe and appropriate operation of each furnace unit. As an extra measure, all forced air, oil-fired furnaces will be equipped with MERV 13 filters.

Air Purifying Units:

Each classroom is being outfitted with an air purifying system (or multiple units depending on square footage and classroom configuration) that employs bi-polar ionization and UVC light, both highly

effective in breaking down and destroying viruses. (See Appendix 3.) These units have been purchased and delivered and will be placed in each classroom mid-August. Homestead staff will clean and disinfect their rooms as they set up their classroom environment according to social distancing protocols.

Common Areas:

Homestead School has no elevators, waiting rooms, breakrooms, vending machines, water/coffee stations, etc. but will keep an alcohol based or hypochlorous acid sanitizer with the teacher closest to the entrance of every building as well as in the administrative office and at each health screening station. All bathrooms at Homestead are one-person bathrooms with the exception of one bathroom with three stalls in the early childhood cohort. Staff will monitor bathroom areas and Homestead administration will post spacing reminders and floor markings to maintain social distancing while in queue for a bathroom.

Movement and Commerce

Student Drop-Off and Pick-Up:

Homestead School will stagger arrival over 45 minutes and has 3 parking lots that it will staff with individuals who can greet and guide students to their appropriate health stations upon arrival and then back to their car/bus at dismissal time. Families will be informed ahead of time that the expectation is that parents stay with their vehicle and staff will support the students' transition to and from the vehicle. At dismissal, each individual will be with their cohort in its own designated play area outdoors until it is time for his or her dismissal. On days that students cannot be in designated play areas due to weather conditions or other unforeseen circumstances, cohorts will remain in their classrooms until their transportation has arrived, at which point each student will go directly to his or her car or bus.

Deliveries:

Deliveries and pickups all happen outdoors, in the parking lot, and any individuals unfamiliar with the school and our system will be greeted in the parking lot by a member of the administrative team, thereby limiting contact to the highest extent possible.

Faculty/Staff Entrances and Exits:

Entry and exit of faculty and staff is based on the building they work in. Each classroom has its own entrance, with only three of our eleven classes/cohorts sharing a door. (See Access to Each Cohort Class Area above for an explanation of the appropriate resolution of this exception.) After entering that door, each of these three cohorts sharing a door separates into its own locker area within their classrooms. Again, bi-directional flow and congregation is limited by use of multiple entries and staggered entry and exit schedules for Building #1 which is the only building in which cohorts share a door.

Section 2: Operational Activity

1. Cohorts

Homestead is using a cohort model, with 11 cohorts, each comprising a class ranging from 12 to 25 students. Within each cohort, there are subgroups, and at least two teachers, so cohorts can be split up and spread between the classroom and the outdoors on campus, thereby potentially decreasing populations by 50% for each cohort indoors. Each cohort will have its own locker area and classroom, a specified entrance/exit to their building, and will always have its own designated outdoor play area for arrival, recess, and dismissal. This play area will be rotated weekly or biweekly so all students experience each of our designated outdoor play areas. The two upper elementary cohorts may intermingle with proper distancing during recess times only on the largest of recess areas. All recess areas are outdoors, excluding the barn, which is well ventilated with open eaves and a 12 foot by 8 foot door.

Essentially, we have created an arrival, schoolday, and dismissal system that separates each cohort at all times, except when getting on or off a school bus. The school is staffed so that teachers will stay with and instruct their own cohorts. The two upper elementary cohorts will have teachers teach lessons across cohorts but via video lessons or with adequate social distancing with masks on.

2. Personal Items and Shared Objects

Families will be asked to provide their child with a school supply case with writing utensils, erasers, scissors, glue, and ruler. Each individual will have their own cubby, and locker for personal items. We are also requiring that each child grades 4-8 have their own laptop and notebooks in addition to the supplies listed above. Homestead School will provide these supplies to students whose families are unable to provide these items.

Homestead School will minimize the number of conference tables and desks in each classroom. In classrooms where such furniture is in use, staff will be trained to ensure that students use proper hand hygiene and sanitizing before and after contact.

Homestead School will also be providing individuals with a “Personal Montessori Tool Kit” for use during in person instruction or online. This kit will hold the key Montessori manipulatives individuals use at their developmental level, thereby further limiting sharing of objects without diminishing the curriculum that a Montessori school offers.

Homestead School is purchasing enough variety and quantity of musical instruments for each individual in each cohort to have their own instrument, not to be reused by anyone until it has been thoroughly sanitized. For example, on a given day, one cohort will receive instruction with the bells while the next receives instruction with rhythm sticks, and the next with the drums, etc., ensuring that materials are not reused before enough time is allotted for thorough cleaning and instruments have sat at least overnight.

3. Remote Learning Preparation

Homestead School is preparing for comprehensive in-person instruction as well as for online instruction, if needed due to quarantine or other extenuating circumstances. While as educators we feel that it is in the best interest of our students to return to campus for in-person instruction, we understand that students or families may have medical reasons that make in-person learning too great a risk. As feasible, we will adopt an online learning approach that takes into account the number of available staff at each learning level and within each classroom as well as the number of students that are in need of online instruction.

This remote learning component will allow us to ensure continued instruction for all of our students. Remote learning will be made available if a student, cohort, or the entire school needs to be in quarantine.

The online component at each level consists of:
- schedule for the student to follow
- take home packet of papers corresponding to the curriculum being offered
- take home set of materials that the students will need to complete their academic work
- scheduled online conferencing lessons and socialization via Google Meet or Zoom
- a Google Classroom through which:
    - attendance will be taken
    - video lessons will be presented
    - links to required and/or optional follow up work will be posted
    - Google Meet learning sessions can easily be joined based on a students daily schedule

Depending on the age level, Homestead's Online Task Force is creating an appropriate daily program which would be a combination of pre-recorded video lessons, large group video conference lessons, and individual or small group video conference lessons. Younger students and emerging readers will be receiving small group or individual instruction to continue their progress with acquiring essential skills, but each student at Homestead will have regular 1:1 video conferences with their advisor (one member of their classroom teaching team.)

Homestead School's Academic Support Team will continue to provide students who require additional support with both individual and small group instruction via video conferencing. Homestead does not have any students enrolled who are English language learners who will need additional support.

Homestead School will temporarily close the classroom where an individual has tested positive for COVID-19 and switch to remote learning for a minimum of 14 days. (See Section 4: Cohort and School Closure Metrics.)

If in-person instruction is not possible for any cohort/class, or the entire school, Homestead School has designated an Online Task Force which is actively creating and updating a plan with all the elements necessary (online infrastructure, student schedule, teacher schedule, teaching materials, student take home materials, and parent/legal guardian information and support system). With this task force's

efforts, Homestead School will, at all times, be prepared two weeks in advance to switch immediately from in-person learning to remote learning with their teachers.

Homestead School administration is coordinating with the Online Task Force at each level of the school to purchase the necessary equipment to facilitate high quality online instruction. Equipment being made available to each classroom include laptop stands, tablet and phone tripods, digital document cameras, microphones, lighting, and laptops and tablets as needed. The Homestead School has a business class high speed fiber optic internet that will ensure the consistent bandwidth needed for streaming video. As mentioned above the school is manufacturing and purchasing the needed Montessori materials to equip students with manipulatives to take home in the case that online learning is necessitated.

Development of Homestead's remote learning model has been established so that whether delivered in-person, remotely, or through a hybrid model due to a local or state school closure, there are clear opportunities for instruction that are accessible to our students. Assistance with technology acquisitions and usage will be available to families. Jack Comstock, Assistant Head of School, is the contact for technological questions or concerns.

Section 3: Restart Operations

1. Overview

Homestead School will reopen to students on September 8, 2020. In preparation for safe reopening, each classroom is being outfitted with an air purifying system (or multiple units depending on square footage and classroom configuration) that employs bi-polar ionization and UVC light, both highly effective in breaking down and destroying viruses. (See Appendix 3.) These units have been purchased and delivered and will be placed in each classroom mid-August. In addition, Homestead staff will clean and disinfect their rooms as they set up their classroom environment according to social distancing protocols.

For periodic room disinfection, for emergency situations, and for help with any necessary deep cleaning, Homestead School has also purchased a backpack atomizer which sprays a non-toxic and CDC recommended, EPA approved-for-COVID-19 disinfectant (List N: Disinfectants for Use Against SARS-CoV-2 (COVID-19) | US EPA) called hypochlorous acid. This disinfectant is highly active against all bacterial, viral, and fungal human pathogens. (See Appendix 4.)

Proper ventilation is already in place since Homestead School has many windows in each classroom and will utilize them for maximal air flow.

Water tests have also been continuous since the closure of schools, and because staff are coming into their classrooms all summer sporadically, all plumbing is in continual use.

Homestead School will conduct its scheduled Fire, Evacuation, and Lockdown Drills as usual in the first weeks of the school year.

2. Appropriate PPE, Replacement Items, and Face Covering Hygiene

Per the NYSDOH Guidance, p. 2, acceptable face coverings include but are not limited to cloth-based face coverings (e.g. homemade sewn, quick cut, bandana) and surgical masks that cover both the mouth and nose.

Homestead School will have an adequate supply of face coverings, masks, and other required PPE on hand should faculty or staff need a replacement, or a student be in need. Items will be kept with administration to be distributed as needed.

Homestead School will advise students, faculty, staff, and visitors that they are required to wear face coverings in common areas or situations where social distancing may be difficult to maintain, such as entering/exiting classrooms, in locker areas, walking in hallways, and traveling around school buildings. Homestead School staff will teach students how to properly wear a face covering and provide opportunities to do that in the classroom, even when appropriate social distancing is being maintained, to further lessen the spread of germs.

Homestead School will allow students, faculty, and staff to use their own acceptable face coverings, but will supply acceptable face coverings to those who wish to obtain it from the school. Homestead School administration may require employees to wear more protective PPE such as gloves, gowns, or face shields, due to the nature of their work, such as supporting a sick child or a child with soiled clothing in getting cleaned up. Homestead will comply with all applicable OSHA standards in these situations.

Homestead School will request that students bring their own face coverings, but will provide such coverings to any students who do not have their own, at no cost to the students. Students and parents/legal guardians are responsible for the hygiene of the face coverings.

Homestead School has already begun to communicate with families about the importance of mask hygiene. A letter has already been sent informing families that at least 2 face coverings are necessary, and face coverings should be cleaned or replaced after use and must not be shared.

3. Hygiene, Cleaning, and Disinfection

Homestead School will adhere to and promote hygiene, cleaning, and disinfection guidance set forth by DOH and the Centers for Disease Control and Prevention (CDC). Administration will train all students, faculty, and staff on proper hand and respiratory hygiene during staff inservice days scheduled before reopening and then staff will teach students throughout the first weeks of school and offer reinstruction as needed throughout the year. The Inservice Training will be in part to review the “Interim Cleaning and Disinfection for Primary and Secondary Schools for COVID-19.” (See Appendix 5.)

Hygiene

Homestead School will send home the “Proper Hand and Respiratory Hygiene” sheet (see Appendix 6) along with face covering guidance, and recommendations on how to support their child in practicing the necessary hygiene skills at home.

Homestead School administration and staff will provide and maintain hand hygiene stations around the school, as follows:

- For hand washing, each classroom/cohort has access to a bathroom with soap, running warm water, and disposable paper towels.
- For hand sanitizing, each classroom is supplied with hypochlorous acid hand sanitizer, as well as alcohol-based hand sanitizer containing at least 60% alcohol for areas when handwashing facilities may not be available or practical. Hand sanitizers will also be available for staff to use and administer in key areas on campus such as the barn, and each class will have an “outdoor kit” to make sanitizer available when cohorts are learning outdoors.

The use of hypochlorous acid hand sanitizer will be the preferred sanitizer given its effectiveness in inactivating viruses and its non-toxicity. (See webpage Hypochlorous Acid: A Review.) The use of alcohol-based hand sanitizers will always be supervised by adults to minimize accidental ingestion and promote safe usage. Parents/guardians can inform the school that they do not want their child to use alcohol-based hand sanitizers by sending a written notice to the school.
Homestead School will provide accommodation for students who cannot use hand sanitizer, to allow for their use of handwashing stations. Hand sanitizer is available throughout common areas such as at building and classroom entrances and exits.

Homestead Administration will place signage near hand sanitizer stations indicating that visibly soiled hands should be washed with soap and water.

Homestead School Administration has placed receptacles around the school for disposal of soiled items, including paper towels and PPE.

Cleaning and Disinfection

At Homestead School, each classroom team is responsible for the cleaning and disinfecting of their rooms. Homestead School administration will provide each classroom team with all the necessary cleaning and disinfecting supplies needed, and will advise staff to have proper ventilation when disinfecting by opening windows and doors to the outside when possible. Homestead School administration chose cleaning products approved for use against COVID-19 on the Environmental Protection Agency (EPA) approved list “N” and will follow product instructions. We also chose the asthma-safer disinfectant hypochlorous acid. (See webpage Safer Disinfecting Products / COVID-19: Safely Clean & Disinfect / Cleaning Laboratory / Our Work / TURI - TURI.) To clean commonly used surfaces (e.g., keyboards, desks, remote controls), cleaning cloths and hypochlorous acid will be provided to staff. In addition, Homestead will provide Clorox Disinfecting Wipes or other approved disposable wipes to use as needed.

To reduce high-touch surfaces, Homestead School has installed touch-free amenities, such as trash receptacles, soap dispensers, and paper towel dispensers. Homestead School will also close all water drinking fountains and encourage students, faculty, and staff to bring their own clearly labeled water bottles.

Classrooms and all items/equipment will be cleaned twice daily and bathrooms will be cleaned and sanitized 3 times daily in accordance to the guidance given in Appendix 5. All shared equipment will be sanitized between use, and students, faculty, and staff will be required to wash hands or sanitize before and after use of any shared items. Staff will maintain logs that include the date, time, and scope of cleaning and disinfection. (See Appendix 7.) Appropriate signage will be put in each bathroom and classroom to promote hygiene. (See Appendix 2.)

Materials and tools used by employees will be regularly cleaned as part of the classroom cleaning checklist using registered disinfectants.

Bathrooms at Homestead School are all single toilet bathrooms, like in a home, with the exception of the bathroom for the youngest students of the school, which has three stalls separated by physical barriers. Homestead School has installed touch free paper towel dispensers in each bathroom as well as touch free soap dispensers.

Cleaning and Disinfection Following Suspected or Confirmed COVID-19 Case:

Homestead School administration and maintenance will provide for the cleaning and disinfection of exposed areas in the event an individual is confirmed to have COVID-19, with such cleaning and disinfection to include, at a minimum, all heavy transit areas and high-touch surfaces in addition to the specific classroom with the confirmed case. Homestead administration and maintenance has read and will follow CDC guidelines on “Cleaning and Disinfecting Your Facility.” (See Appendix 8.)

If someone is suspected or confirmed to have COVID-19, Homestead School administration will:

- Immediately close off areas used by the person who is suspected or confirmed to have COVID-19.
- Open outside doors and windows, if not already open, to increase air circulation in the area.
- Wait 24 hours before we clean and disinfect.
- Clean and disinfect all areas used by the person suspected or confirmed to have COVID-19, such as offices, classrooms, bathrooms, lockers, and common areas.
- Once the area has been appropriately cleaned and disinfected, it will be reopened for use.

Individuals without close or proximate contact with the person suspected or confirmed to have COVID-19 can return to the area and resume school activities after cleaning and disinfection protocol has been completed.

Homestead administration has read and will apply DOH’s “Interim Guidance for Public and Private Employees Returning Work Following COVID-19 Infection or Exposure” for information on “close and proximate” contacts.

If more than seven days have passed since the person who is suspected or confirmed to have COVID-19 visited or used the facility, additional cleaning and disinfection is not necessary, but routine cleaning and disinfection should continue.

4. Mental Health, Behavioral and Emotional Support

Academic learning cannot be effective until the basic human needs for physical and emotional safety are met. A commitment to social emotional well-being in supporting this transition back to school does not happen at the expense of academics, it creates the mental, social, and emotional space necessary for academic learning to occur.

It is unrealistic to expect that students will return to instruction as they left it months ago. Students may have experienced a stressful or traumatic experience while isolated from school, family, friends, and community. Some have had positive experiences during school closures as well- learning, growing, and discovering new identities as learners and members of the family. Schools are positioned to support and nurture these new skills and mindsets.

Students may return to instruction anxious, fearful, withdrawn, grieving, and/or unprepared to self-manage their behaviors. Homestead faculty and staff will be prepared to meet students where they are, regardless of the circumstances in which they find themselves.

Homestead School has established following teams, to meet the social and emotional needs of the students in our school:

1. Homestead School has a student to teacher ratio of 8:1 or less, and, inherent in the Montessori method is the importance of observation of each individual's social, emotional, academic, and personal growth. Therefore, every faculty and staff member is trained and practiced on how to support a student's well being.

2. We have an Advisory Council/Student Support Team composed of 3 staff members with over 75 years of experience teaching Homestead students between them, and we have added 3 community members to the team: one who has completed Yoga and Mindfulness Teacher Training and Building Children's Social-Emotional Skills, one who is a licensed Mental Health Counselor, and one who is trained in physical education, physical movement for emotional well-being, and community building techniques. This team will collaborate with class teachers on how to handle significant behavior or emotional issues as well as how to implement daily and weekly learning opportunities in resilience and well-being.

Homestead School has established the following plan which consists of training all staff to be observers. The school has established a system of regular communication within classroom teams, across teaching teams at the same level, with Student Support Services, and with administration as needed. This plan will be reviewed and updated by our Student Support Services and administrative teams as needed.

1) Staff Training

- Each classroom has 2-3 staff making observations daily on students academic, social, and emotional progress.
- Training on inservice days will communicate social emotional well-being and learning as a priority and engage members of the school community in implementation efforts. We will allot 3 sessions to supporting student transition onto campus and monitoring/ supporting each student's social and emotional well-being. Refresher sessions on this will continue throughout the year. We will train teachers and open a discussion on how to calmly uphold hygiene and social distancing protocol, how to listen and dialogue with students about struggles with the "new norms".
- Each classroom will create a "peace corner" for individuals to turn to when feeling anxious.
- Student Support Services will seek out professional development opportunities for faculty and staff on how to talk with and support students for developing coping and resilience skills for students, as well as for faculty and staff.

2) Communication System

- Weekly meetings happen within each teaching team to discuss each child, and regularly across teaching teams at the same developmental level, to develop action plans to support individuals with emotional needs.
- The Head of Student Support Services will meet weekly with teaching teams to address any concerns faculty may have. That information will be carried back to the Advisory Council and recommendations will be made. Administration meets with the Head of Support Services weekly to offer necessary support for implementation of plans.
- Multi-Tiered Support System- Homestead has a multi-tiered System of Support that is laid out in the Academic Services section of the Family Handbook. Once student needs are broadly and individually identified, tier 1, 2 and 3 activities and services can be developed or adopted to address those needs.

Support for Vulnerable Populations: For students, faculty and staff who are at increased risk for severe COVID-19 illness, and individuals who may not feel comfortable returning to an in-person educational environment, Homestead School will, to the extent possible, offer positions or learning situations to accommodate the specific circumstance. Options are increased social distancing and/or outdoor learning options, additional PPE provided by the family or the school, a hybrid of in-person and online instruction, or remote instruction. Homestead School will modify social distancing for the youngest students, students receiving language services, or students with hearing impairment or loss by allowing closer proximity as needed, with appropriate face coverings, or transitioning to an open air learning environment.

Section 4: COVID Monitoring, Containment, & Closure Protocol

1. General

Homestead School has been in communication with its staff and families about reopening since June 2020. Regular emails have been sent via our communications database (TADS Educate), informing families of the measures we intend to implement.

Our reopening plan will be posted on the school's website. This plan was made in consultation with a task force of staff members, administration, school parents, local EMT, Fire Dept officials, and local public school administrators. We will continue to use our communications database to send regular emails, updates, and a PDF of this plan to each faculty, staff, and family of our students. Homestead School also has two social media venues through which we guide families to our website and will post updates and necessary information on these sites. Homestead School does not have any families that require multiple language communications, so all of our communication will be in English only.

Homestead School's Head of School has reached out to staff and families with reopening ideas and has asked each time for insight and feedback on the ideas presented. To date, there have been three outreaches in this manner to staff and three separate ones to families. Homestead Administration has been in touch with the Superintendent of Sullivan County BOCES, Robert Dufour, as we have been developing our protocols, and Homestead's Head of School will meet with Superintendent of Schools, John Mogano, of Eldred Central School District in which the Homestead School is located.

Homestead School administration is planning a staff inservice September 1st, 2nd, and 3rd, 2020, devoted to COVID protocol, preparation, hygiene, and safety, including how to teach the aforementioned to students at each age level and monitor compliance with the safety protocols including but not limited to hand hygiene, proper face covering wearing, social distancing, and respiratory hygiene (see Appendix 2 and 9 for mask wearing guidance.)

Homestead School Administration will print and post the posters given by CDC, DOH, and school districts in each classroom, staff bathroom, and in each classroom's bathroom. (See Appendix 2.)

Head of School, Peter Comstock is the coordinator and the main contact upon the identification of positive COVID-19 cases and will be responsible for subsequent communication. Peter Comstock is already and will continue to be responsible for answering questions from students, faculty, staff, and parents or legal guardians of students regarding the COVID-19 public health emergency and plans implemented by the school. He will be responsible for receiving and attesting to having reviewed all screening activities, and is the contact for individuals to inform if they later experience COVID-19-related symptoms or COVID-19 exposure, as noted on the "Regular Health Status Survey." (See Appendix 10.) He will work closely with local health departments and other schools to monitor public health conditions and jointly develop monitoring strategies.

2. Monitoring of Health Conditions

Monitoring includes protocols and procedures to track health conditions at school. At a minimum, our plans will incorporate the following:

Screening at Home

It is of utmost importance that families and the school work in close contact to maintain a safe campus. Families/legal guardians who know their children best are the most qualified to determine whether the symptoms experienced by their children are potentially COVID-19 or are simply allergies or other common childhood illnesses. We will request that before leaving for school, families/legal guardians perform a temperature check and complete the "Daily Home Screening for Students." Information on how to submit the survey to the school will be communicated to families at least 14 days prior to reopening along with a contact person for technical issues. (See Appendix 10 for a larger image of student screening survey.)

Daily Home Screening for Students

Parents: Please complete this short check each morning and report your child's information [INSERT YOUR SCHOOL REPORTING INSTRUCTIONS] in the morning before your child leaves for school.

SECTION 1: Symptoms

If your child has any of the following symptoms, that indicates a possible illness that may decrease the student's ability to learn and also put them at risk for spreading illness to others. Please check your child for these symptoms:

☐	Temperature 100.4 degrees Fahrenheit or higher when taken by mouth;
☐	Sore throat;
☐	New uncontrolled cough that causes difficulty breathing (for students with chronic allergic/ asthmatic cough, a change in their cough from baseline);
☐	Diarrhea, vomiting, or abdominal pain
☐	New onset of severe headache, especially with a fever.

SECTION 2: Close Contact/Potential Exposure

☐	Had close contact (within 6 feet of an infected person for at least 15 minutes) with a person with confirmed COVID-19: OR
☐	Had close contact (within 6 feet of an infected person for at least 15 minutes) with person under quarantine for possible exposure to SARS-CoV-2; OR
☐	Traveled to or lived in an area where the local, Tribal, territorial, or state health department is reporting large numbers of COVID-19 cases as described in the Community Mitigation Framework
☐	New uncontrolled cough that causes difficulty breathing (for students with chronic allergic/ asthmatic cough, a change in their cough from baseline);
☐	Live in areas of high community transmission (as described in the Community Mitigation Framework) while the school remains open

If the student, parent, or caregiver answers YES to any question in Section 1 but NO to any questions in Section 2, the student would be excused from school in accordance with the existing School Illness Management Policy found in the Homestead School Family Handbook (e.g., until symptom-free for 24 hours without fever reducing medications).

If the student, parent, or caregiver answers YES to any question in Section 1 and YES to any question in Section 2, the students family/caregiver should seek evaluation by their healthcare provider and possible testing.

Students diagnosed with COVID-19 or who answer YES to any question in Section 1 and YES to any question in Section 2 prior to negative COVID-19 test results should stay home, isolate, and have their health monitored. Families should follow directions from their state or local health department. (See Chart 1 below under Section 4: Containment.)

Screening at School

Upon arrival on campus, students, faculty, and staff will have a mandatory temperature check conducted by personnel trained in the equipment use and its decontamination process. Faculty and staff will also complete the "Staff Regular Health Status Survey" (see Appendix 10) daily, before arrival. Visitors will be limited to essential visits only, such as maintenance. Any visitors will have the same screening and survey procedures as faculty and staff. This will be conducted in Building #1's foyer by administrative staff.

All personnel performing in-person screening activities, including temperature checks, will be appropriately protected from exposure to potentially infectious individuals entering the facilities by wearing an acceptable mask and face shield. They will also be provided with gloves and gowns to use if they feel it is necessary. Personnel performing screening activities will be trained by Homestead School's EMT, Ann Steimle, who is familiar with CDC, DOH, and OSHA protocols.

Homestead School administration may choose to maintain basic records that confirm individuals were screened and that the result of such screening was simply pass/fail or cleared/not cleared, for example.

On-site screening stations for each cohort have been established to prevent intermingling with other students. 6 ft. distancing markers will be present at all screening stations and all persons will be required to wear face coverings.

Screening staff will have the following PPE available to them: N-95 masks, face shields, gloves and protective gowns.

If individuals pass the screening, they will be permitted on campus after having their hands sanitized by the staff who is screening them.

If a child presents a temperature of greater than 100.0°F, the individual will be taken to an isolated location until a parent/legal guardian can pick up the child. If an adult presents a temperature of greater than 100.0°F they will be denied entry and be supported in leaving campus immediately. If an individual exhibits symptoms of COVID-19, or answers "yes" to any of the questions on the "Daily Home Screening for Students" or "Staff Regular Health Status Survey," the individual will be will taken to an isolated location for further evaluation to determine whether they can be permitted entry to the facilities.

Homestead School administration will advise families/legal guardians that the manifestation of COVID-19 in children, although similar, is not always the same as that for adults. Children may be less likely to present with fever as an initial symptom, and may only have gastrointestinal tract symptoms, which should be taken into consideration during the screening process. Homestead School will also

remind parents/guardians that students may not attend school if they have had a temperature of greater than 100.0°F (or any of the other symptoms listed in Section 1 of the Daily Home Screening for Students) at any time in the past 24 hours, even if a fever-reducing medication was administered and the student no longer has a fever. Homestead School administration has provided clear guidelines in the Homestead School Family Handbook and will make themselves available for consultation if a parent/legal guardian is in doubt whether attendance is appropriate or not.

Testing Protocols

Any individual who screens positive for COVID-19 exposure or symptoms, if screened at the school, must be immediately sent home with instructions to contact their health care provider for assessment and testing.

Testing Responsibility

In the case of a larger outbreak, Homestead School will work with the local Public Health Services Department located at 50 Community Lane, PO Box 590. Liberty, New York 12754. Phone: 845-292-5910 to administer large scale testing.

3. Containment of Potential Transmission of COVID-19 and Contact Tracing

Homestead School will notify the state and local health department immediately upon being informed of any positive COVID-19 diagnostic test result by an individual within our school facilities or on school grounds, including students, faculty, staff, and visitors. In the case of an individual testing positive, Homestead School will immediately attempt to identify all contacts with that individual while maintaining confidentiality as required by federal and state law and regulations. Homestead will utilize the “Contact Tracing Tool” in such events. (See Appendix 11.) Further, Homestead School will cooperate with our state and local health departments’ contact tracing, isolation, and quarantine efforts. Homestead School will maintain and share accurate records of time, date, nature of the incident, and actions taken.

Homestead School has developed the following containment protocols and procedures for how to respond to positive or presumed-positive cases, as well as preventative practices:

Staff or Students Exhibiting Symptoms of COVID-19

The individual exhibiting Covid-19 symptoms will be asked to “mask up” if not already doing so, asked to wear gloves, and will be sent to the isolation room located on the second floor of the Main Building (#1) for further evaluation by the school’s EMT, Ann Steimle. This evaluation will examine individual’s symptoms in more detail, looking for the following:

- A fever of 100.0 F or higher
- Shortness of breath or difficulty breathing
- A cough
- A runny nose
- Muscle pain
- Tiredness

If COVID-19 symptoms are confirmed, in the case of staff members, they will be asked to go home and speak with their health care provider. If COVID-19 symptoms are confirmed, in the case of students, the family will be contacted to arrange for a pick-up of that student. When the family arrives, they will remain in their car and Homestead staff will bring the child to the car. The family will be informed of the results of the school's screening procedure, the need to speak with the child's health care provider, the possible need for a COVID-19 test, the location of such testing facilities, and be given the New York State COVID-19 Hotline, 1-888-364-3065, and asked to speak with the child's health care provider.

In either case, whether staff or students, Homestead School will provide transportation assistance if needed to ensure that the individuals are able to get home safely and in a timely fashion. Transportation staff will have the following PPE available to them: N-95 masks, face shields, gloves and protective gowns. If illness is serious, 9-1-1 will be called.

Depending upon the outcome of the screened individual's condition, the isolation room and the school vehicle will be subject to disinfection using the school's atomizer which projects a non-toxic, CDC recommended, EPA approved-for-COVID-19 disinfectant: hypochlorous acid. In the case of a confirmed Covid-19 case, a deep cleaning will take place in the facilities in which the affected individual interacted.

Students with Asthmatic Conditions are identified at the start of each year. Families send in the necessary nebulizers and emergency equipment to Ann Steimle, EMT, who keeps all items in a locked closet for use as needed. A written authorization from the family and the healthcare provider accompanies all articles related to the care of each individual with asthmatic conditions.

Protocol for COVID Symptomatic, COVID Positive Exposure, or COVID Positive Test Results

Homestead School will require that persons who have tested positive for COVID-19 complete the necessary isolation and quarantine procedure and have recovered, and therefore will not transmit COVID-19 when returning to in-person learning. Discharge from isolation and return to school would be conducted in coordination with the local health department. The Homestead School will follow the protocol for COVID symptomatic, COVID positive exposure, or COVID positive test results outlined in the table below:

Chart 1

Scenario	Immediate Actions
Scenario 1: A student or staff member either exhibits COVID-19 symptoms, answers "yes" to a health screening question, or has a temperature of 100.00 or above.	• Student/staff sent home • Student/staff instructed to get tested
Scenario 2: A family member or someone in close contact with a student or staff member (outside the school community) tests positive for COVID-19	• Student/staff sent home • Student/staff instructed to get tested • Student/staff instructed to quarantine, even if they test negative, for a full 14 days after (1) date of last exposure to COVID-19 positive non-household contact or (2) COVID-19 positive household member completes their isolation • If student/staff test positive, see Scenario 3 below • School administration notified

Scenario 3: A student or staff member tests positive for COVID-19.	• Student/staff sent home if not already quarantined
	• Student/staff instructed to isolate for 14 days after symptom onset OR 7 days after resolution of symptoms, whichever is longer. (If never symptomatic, isolate for 14 days after positive test.)
	• School-based close contacts identified and instructed to test & quarantine for 14 days
	  ○ In stable elementary classroom cohorts: entire cohort
	  ○ In other settings: use seating chart, consult with teacher/staff
	• School administration notified
	• Public Health Department notified

Negative COVID-19 Test Result Protocols

Documentation of negative test results must be provided to Homestead School administration. Homestead School will follow the protocol outlined in the chart below for individuals who test COVID Negative (note: Chart 2 references the scenarios outlined in the Chart 1 above):

Chart 2

Scenario	Immediate Actions
A student or staff member tests negative for COVID-19 after Scenario 1 (symptomatic)	• Student/staff may return to school 72 hours after resolution of fever and improvement in other symptoms
A student or staff member tests negative after Scenario 2 (close contact)	• Student/staff must remain in quarantine for a full 14 days after (1) date of last exposure to COVID-19 positive non-household contact or (2) date that COVID-19 positive household member completes their isolation
A student or staff member tests negative after routine surveillance testing (no symptoms and no close contact to a confirmed COVID-19 case)	• Can return to school/work immediately

In lieu of a negative test result, and adhering to the chart above, Homestead School will allow students and staff to return to work with a medical note by a physician that provides alternative explanations for symptoms and reasons for not ordering COVID-19 testing.

Return to School:

- Symptomatic individuals who test positive for COVID-19 can return 14 days after symptom onset OR 7 days after resolution of fever and improvement in other symptoms, whichever is longer.
- Asymptomatic individuals who test positive for COVID-19 can return 14 days after their positive test result.
- Close contacts to confirmed COVID-19 cases can return after completing the required isolation period described above in Chart 1 Scenario 2.

Homestead School administration has read and will uphold DOH's "Interim Guidance for Public and Private Employees Returning to Work Following COVID-19 Infection or Exposure" (See Appendix 12.) regarding protocols and policies for faculty and staff seeking to return to work after a suspected or confirmed case of COVID-19 or after the faculty or staff member had close or proximate contact with a person with COVID-19.

Hygiene, Cleaning, and Disinfection:

Homestead School will implement the hygiene, cleaning, and disinfecting protocol as outlined in Section 3: Hygiene, Cleaning, and Disinfection.

Contact Tracing Support:

In order to identify if the level of COVID-19 transmission may be increasing in the school setting beyond an acceptable level as defined by state standards, Homestead School's administration will, from the the first day of school, keep accurate and consistent records of students, faculty, and staff that have tested positive for COVID-19 or have been in contact with persons who have tested positive for COVID-19.

Homestead School will support local health departments in contact tracing efforts using the protocols, training, and tools provided through the New York State Contact Tracing Program. (See Appendix 11.) Homestead School will train faculty and staff to assist with contact tracing efforts for populations in school facilities and on school grounds, where feasible. Confidentiality must be maintained as required by federal and state law and regulations.

Communication:

Homestead School's Head of School, Peter Comstock, will coordinate with the local state and county health departments:

- NY State Public Health Departments of Sullivan County (845) 794-2045 and Orange County (845) 858-1468.
- PA State Health Department: (570) 253-7141
- NJ State: Sussex County Public Health Nursing: (973) 579-0570

Homestead School administration will share protocols and safety measures taken by the school with all relevant parties including parents/legal guardians, faculty, staff, students and local communities while maintaining confidentiality as required by state and federal laws.

Homestead administration will require individuals to immediately disclose if and when their responses to any of the questions in the weekly Regular Health Survey change, such as if they begin to experience symptoms of COVID-19, including during or outside of school hours.

4. Closure of School Facilities if Necessitated by Widespread Virus Transmission.

Because stable cohorts have been maintained, all students and staff in that cohort will be instructed to get COVID-19 testing and remain at home for 14 days. Learning can continue for students in that cohort via our remote learning plan established by Homestead School's Online Task Force. Metrics for widespread virus are as follows:

Cohort and School Closure Metrics

1) If one student, staff, or multiple people in a cohort test positive for COVID-19, Homestead School will close access to that cohort's classroom, outdoor weatherproof structure, and playground area. Homestead's maintenance team will clean and disinfect according to the protocol outlined in Section 3: Cleaning and Disinfection Following Suspected or Confirmed COVID-19 Case. That particular cohort will transition to remote learning for a minimum of 14

days. (For students and staff within the infected cohort to return to school, a negative COVID test must be presented.)

2) If the school has a second cohort in which a student, staff, or multiple people test positive for COVID-19 this cohort will also follow the protocol outlined in 1. (For students and staff within the infected cohorts to return to school, a negative COVID test must be presented.)
3) Once 3 cohorts simultaneously have members who have tested positive for COVID-19, the entire school will switch to remote learning for a minimum of 14 days. (For students and staff within the infected cohorts to return to school, a negative COVID test must be presented. All other students and staff would continue to complete the health survey and would need to be asymptomatic before returning to school.)
4) At any time, if there is evidence of rising cases and a threat of spread to the school community, Homestead School may choose to pre-emptively switch part of or all of the school to remote learning to mitigate spread of the virus. For example, Homestead School may choose to have its eldest students switch to remote learning preemptively because those students are more able to benefit from remote learning than the younger students and they are also more likely to spread COVID-19.

In the event of a campus closure, Homestead School may choose to implement a phased reopening. For example, Homestead may deem it safest to 1.) allow the youngest students to return to campus for a certain number of days before opening the elementary and middle school programs, or 2.) to open one building at a time.

Appendices

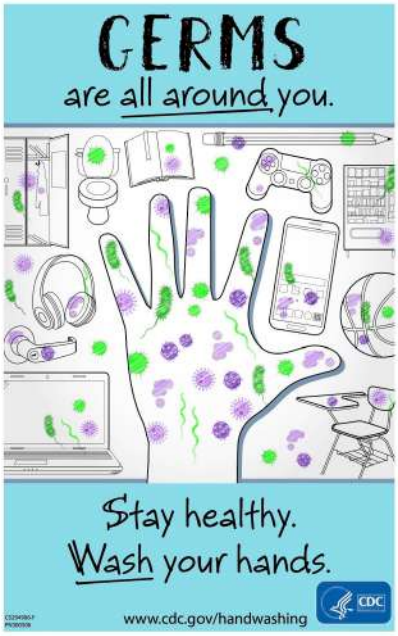
Appendix 1: Classroom Maximum Occupancy Considering Social Distancing and Class Sizes

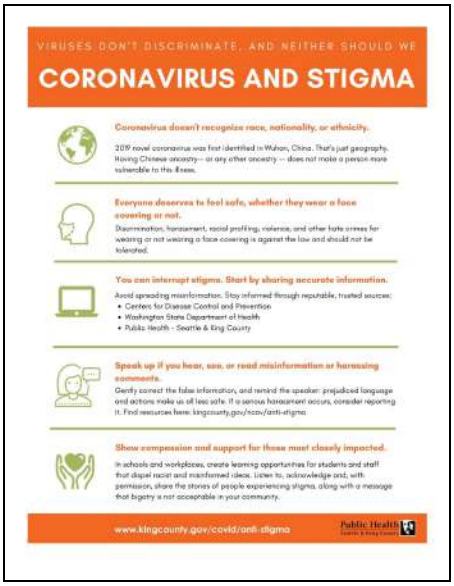
Classroom Maximum Occupancy Considering Social Distancing and Class Sizes

Classroom	Maximum Occupancy	Realistic Max	Enrolled Students	Layout Configuration/ Dimensions
			(# teachers)	
BUILDING 1				
Early Childhood 1 lower front room	24	21	12 (2)	2 rectangular sections with restroom
Early Childhood 2 lower back room	35	23	16 (2)	rectangular room w/ portable sink
Early Childhood 3 upper east room	24	24	16 (2)	main part is rectangular, plus 2 smaller "nooks" and restroom
Early Childhood 4 upper west room	26	24	18 (2)	main part is rectangular, plus 3 smaller "nooks" and restroom
Early Childhood 5 upper north room	28	24	21 (3)	rectangular classroom with restroom
BUILDING 2 (Art)	12	12	12 (2)	rectangular room- sink only
BUILDING 3				
Lower Elementary 1 lower room	20	20	16 (2)	rectangular room w/ portable sink
Lower Elementary 2 middle room	39	28	25 (3)	2 rectangular sections, one with 2 exterior sinks and 3 private toilets
Lower Elementary 3 upper room	33	28	20 (2-3)	3 rectangular sections, one with restroom and locker area
BUILDING 4				
Upper Elementary 1 quonset hut	40	35	22 (3)	rectangular room with restroom
Upper Elementary 2 room below MS	32	26	20 (2)	2 rectangular, sections with external restroom
Middle School upstairs	30	25	18 (3)	rectangular with external sink, staff area, and restroom
Staff Room	12	6	N/A	rectangular

* Maximum occupancy in each room was based upon the determination that all persons are able to maintain a minimum of six foot distancing from each other allowing for classroom shelving and necessary furniture items. Realistic max occupancy was calculated with the additional considerations of classroom configuration, additional furniture, and the current staffing of each room.

Appendix 2: Signage for Bathrooms, Hallways, and Classrooms (smaller than actual size)





Appendix 3: Air Purifying Units

Cleaning Indoor Air using AtmosAir Bi-Polar Ionization Technology

Dr. Philip M. Tierno Jr., Professor of Microbiology and Pathology, New York University School of Medicine

April 2017

Clean air, both outdoors and indoors, is an essential determinant of a healthy life and a person's well being.

Outdoor Air Quality OAQ): The federal government has made great progress towards cleaning outdoor air since 1970 via the Clean Air Act (CAA) and its additional amendments signed into law in 1990. This Act resulted in a significant 70% reduction of aggregate emissions of six representative indicators of common pollutants between the years of 1970 to 2014! Thusly, the CAA laws define the EPA's responsibilities for protecting and improving the nation's outdoor air quality utilizing the advances in science and technology to accomplish this task (1). These outdoor air quality improvements have enabled many areas of the country to meet national air quality standards set to protect public health and the environment. To simply summarize: for more than 40 years the CAA has significantly cut outside air pollution even as the U.S. economy has grown. Because of the act, Americans breathe less outdoor air pollution and face lower premature death and other adverse health effects (1).

Indoor Air Quality (IAQ): Despite public health awareness and progress on outdoor air pollution, progress on indoor air pollution has significantly lagged behind. The quality of air inside homes, offices, schools, day care centers, hospitals and other health care facilities (where multi-drug resistant bacteria reside), as well as other private and public buildings where people spend a large part of their life, is also an essential determinant of health and well being. Interestingly, indoor air quality is profoundly important for two main reasons. First, most Americans spend about 90% of their time indoors! Second, the EPA has reported that indoor air pollution is 25 to 100 times worse than the outdoor air. However there are some standards for indoor air. For example, if you work with certain chemicals, sprayed substances, powders or known carcinogens or allergens, the Occupational Health and Safety Administration (OSHA), the EPA of the workplace, requires employers to reduce risk for workers (2). The EPA has also developed some additional IAQ tools for schools (3). Certainly also the WHO (World Health Organization) has a long tradition in synthesizing the evidence on the health aspects of air quality and in providing air quality guidelines defining conditions for healthy air (4). IAQ is a term, which refers to air quality within as well as around buildings and structures, especially as it relates to the health and comfort of the occupants (5). IAQ is affected by gases (such as carbon monoxide and carbon dioxide), volatile organic compounds (VOCs), particulates, microbes (including bacteria, viruses and mold fungi), allergens, odors of a variety of types, and anything else that might affect the quality of the air.

How We Make Each Other Sick: There are available techniques for cleaning indoor air, but in order to better understand these options it is imperative to first discuss the dynamics of how we make each other sick. The great majority of human infections, about 80%, are transmitted by direct and indirect contact, and the remaining 20% of infections are transmitted by 3 other modalities, namely, common source (contaminated food or drink), arthropod vectors (such as

mosquitoes and ticks), and true airborne droplets (particles 5 micrometers or less, which is 5 millionths of a meter in size, and which do not readily drop to the affect of gravity. Infections such as tuberculosis, SARS and influenza can be spread in this way) (6).

Contact Spread: For contact spread the perspective host must have actual contact with the source of germs. Such contact can be direct, indirect or via aerosol droplets. An easy to understand example of **direct contact** is shaking hands or kissing someone who has a cold, which can easily spread that cold virus to you. Coughing, sneezing or talking (**are aerosols** which usually spread *within a few feet from the source and the victim*) in the face of another person in close proximity can also spread their germs directly to that person. On the other hand, **indirect contact** spread is distinguished from direct contact transmission by an intermediate object, usually an *inanimate object (fomite)* like a doorknob or other surface that a contagious person has touched or contaminated very recently, then afterwards, you touch it and then touch your eyes, nose or mouth or an opening in the skin which are the conduits of entry into your body.

Airborne Spread: Airborne spread implies the spread of germs *over a distance of more than several feet between the source and the victim.* The infectious organisms are usually contained in *droplet nuclei*, which are 5 micrometers in diameter (5 millionths of a meter) or smaller in size. These particles can remain suspended in air for hours or days and do not easily fall to the forces of gravity. The classic example of airborne spread is the transmission of the tuberculosis bacillus by means of droplet nuclei. Another organism spread via airborne is influenza, and yet another virus called SARS. We also learned in the post-911 anthrax attacks on NYC and elsewhere that the spores of anthrax also travel well in the air and can be kicked-up, so to speak, in particles and dust (6).

Allergens: Recently there was a report of a leaky dust filled vacuum cleaner, contaminated with Salmonella, which got re-suspended in the air each time the vacuum cleaner was turned on thereby infecting and re-infecting the household members. What is important to understand is that dust particles can carry germs but they can also carry allergens. According to the CDC allergies are the 6th leading cause of chronic disease in the U.S. at a cost of about $18 Billion all told. An interesting statistic often quoted is that the average 1500 sq. ft. house accumulates about 40 pounds of dust over a year. And there are approximately 40,000 dust mites and debris that are contained in every ounce of dust. Breathing in such air can exacerbate existing allergies including asthma. Some ill health effects may show up shortly after a single exposure to pollutants in indoor air while some people can become sensitized to biological or chemical pollutants after repeated exposure. Other ill health effects may show up either years after exposure has occurred, or after repeated periods of exposure to poor indoor air quality (6).

Greatest Risks: Anywhere there is a building or facility that houses numerous people over an extended period of time, there is an unquestionable need to provide and/or maintain the quality of the indoor air. This is especially so for hospitals, medical centers, and other medical facilities, because this is where most of the antibiotic resistant bacteria reside and where many sick people are housed. As previously mentioned 80% of all infectious diseases are transmitted by direct and indirect contact. This issue is especially important in hospitals where caregivers can contribute to unnecessary illness and even deaths. According to the CDC there are almost a million nosocomial (hospital acquired) infections that occur every year as well as about 75,000 deaths from these infections at a cost to society of about $4 billion annually (7). Nosocomial infections, especially those caused by highly antibiotic resistant germs, kill more people every year than pancreatic cancer, leukemia, multiple sclerosis, Parkinson's disease, and Alzheimer's combined. These diseases are the subjects of large public-relations campaigns to raise

awareness and solicit funds to combat them. Yet nothing as robust exists for nosocomial infections. Certainly antibiotics have saved millions of lives over the past 65 years or so, and will save countless others in the decades to come but in one sense the world's antibiotic use has been a 65 year experiment in self-sabotage. The selective ability to develop antibiotic drug resistance has allowed us to create more and more dangerous germs. Misuse of wonder drugs has created superbugs. Nowhere are superbugs more prevalent than in hospitals and medical facilities (6). It is of the utmost importance to prevent infection in anyway and everyway we can (including use of advanced technology that can maintain *indoor air quality*)., so as not to be faced with a treatment dilemma.

Available Techniques for Purifying and/or Positively Affecting Indoor Air Quality: There are currently several technologies on the market that are useful to varying degrees for the purification of air and the maintenance of IAQ, allowing for reduction of infectious agents such as bacteria, viruses and fungi, as well as reduction in allergens and other particulates, especially useful in hospitals and other medical facilities. If we can greatly reduce or prevent an infection from occurring, we do not have to worry about antibiotic resistance or other problematic aspects of treating them. In a similar way reducing or eliminating allergens may more positively affect the 6th leading cause of chronic disease in the U.S. –allergies and asthma. These IAQ purification techniques are listed as follows in order of decreasing efficacy: Bi-Polar Ionization, PCO/PCI (photo-catalytic oxidation) technology, Needle-point Ionization, HEPA Air Filters, UV Light, Electrostatic precipitation. Of the aforementioned, there is only one technology that satisfies all of the tenants for providing clean indoor air quality for an entire building, which uses low energy, is effective against bacteria, viruses, and mold fungi (whether in air or on surfaces), neutralizes particulates, breaks down VOCs (Volatile Organic Compounds) eliminates unpleasant odors, eliminates static electricity, and produces no chemical or harmful by-products and this is accomplished by the production of positive and negative ions (bipolar ionization). That system is AtmosAir Bipolar Ionization.

Bipolar Ionization: Bipolar ionization is created when an alternating voltage source (AC) is applied to a special tube with two electrodes. When voltage is applied to the tubes electrodes (like electricity is applied to a light bulb's filament) an ionization field is produced around the tube (just as light is produced from the light bulb). However the ionization cannot be seen but its presence will result in "mountain air" freshness. Such ions occur naturally especially on mountain tops and waterfalls, where the production of both positive and negative ions purify the air. Such a system has significant commercial and industrial applications. The airflow distributes the energized ions into all spaces served by the duct system in an in-duct installation or into the application space if a standalone is used. The beauty of the AtmosAir system is just how easily it integrates into existing commercial and residential HVAC systems. Unlike most air purification systems AtmosAir seeks out particulates and contaminants, including germs and does not wait for pollutants to find their way into the filter within the air handler. Instead **charged ions go to the contaminants in the space where you breathe, just as in nature, and do so in a continuous fashion and with continuous disinfection.**

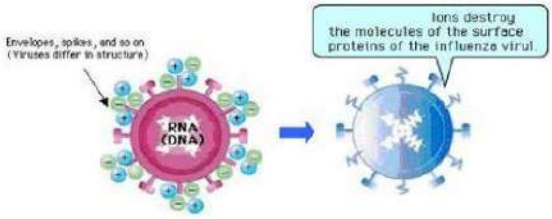
These positively and negatively charged ions have an effect on dust particles, allergen VOC's, odors, and bacteria, viruses, molds and mold spores. For example, regarding particles--- oppositely charged ions cause particles to attract to other particles and become bigger and heavier, by a process called **"agglomeration"**. These bigger heavier particles can now be better trapped by HVAC system filters so the filters operate more efficiently. Also

many small particles that are generated within a space by people and their activities may never get to system filters and ordinarily stay suspended in air for long periods and can be breathed in, increasing the chance of illness and respiratory distress. The **AtmosAir bi-polar ion process will drop these to the floor quickly taking them away from where we breathe**. VOC's or gaseous chemical off gasses typically cause odors and irritations. These are also a major source of "Sick Building Syndrome" complaints, where people feel ill at work but feel better when they leave the building. **Bi-Polar ions break down hydrocarbon chains** that make up these complex compounds into immeasurable levels of carbon dioxide and water vapor. On micro-organisms like bacteria, virus and molds, **bi-polar ions will interrupt the reproductive ability of these organisms** so rather than colony forming units (cfu) increasing and spreading and expanding, they shrink away and lessen the chance of infection.

The Effect of AtmosAir Bipolar Ionization generators on microorganisms:

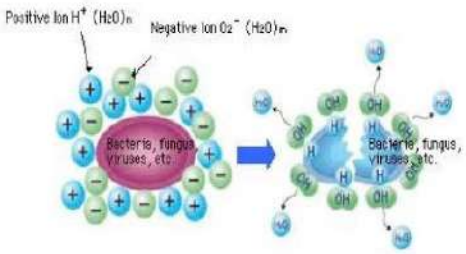
The negative and positive ions that are generated by BPI are designed to treat and allow energy imparted by the ions to transform ordinary oxygen into Reactive Oxygen Species (ROS), Superoxides, Peroxides, and Hydroxyls. These ions have the property of clustering around micro-particles, and thus, they surround harmful substances such as airborne mold, viruses, bacteria and allergens. At that point, a chemical reaction occurs on the cell membrane surface, and they are transformed into OH radicals, which are powerfully active (Standard Oxidation Potential [V] = 2.81 for OH vs H2O2 = 1.78 and OO2 = 1.23) and because they are unstable they rob the harmful substance of a hydrogen atom (H). The result is that they are inactivated by severing the protein on cell membrane, which causes the opening of holes, thusly destroying the entity. The OH radicals instantly bond with the removed hydrogen(H), forming water vapor (H2O) which returns to the air. It is most important to note that bipolar ionization kills microbes without damaging DNA (therefore it does not cause cancer) in the interior of cells and unlike other physical and chemical agents, such as UV light, radioactivity and use of caustic chemicals, BPI is totally GREEN and it does NOT adversely affect the environment in any way.

See the figures below, which pictorially help explain this process:



Mechanism for Inactivating Airborne Virus

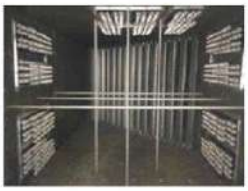
The positive (H+) and negative (O2-) ions surround the hemagglutinin (surface proteins that form on organisms and trigger infections) and change into highly reactive OH groups called hydroxyl radicals (•OH). These take a hydrogen molecule from the hemagglutinin and change into water (H2O). The ions destroy the virus surface structure, for example its envelopes and spikes, on a molecular level. As a result, the virus cannot infect even if it enters the body.



Mechanism for Inactivating Bacteria, Fungi

The positive (H+) and negative (O2 -) ions cluster together on the surface of airborne bacteria or fungi, causing a chemical reaction that results in the creation of highly reactive OH groups called hydroxyl radicals (•OH). The hydroxyl radical will take a hydrogen molecule from the cell wall of an airborne bacteria or fungi particle.

The AtmosAir technology accomplishes these benefits by sizing systems that consist of one of more bi-polar ion tubes, to the airflow rate of the HVAC system and the particulars of the space. The system then saturates the spaces with adequate quantities of bi-polar ions to ensure these reactions can occur. *See below some pictures of installed systems:*


One advantage to the way the AtmosAir technology is applied is that it requires no re-engineering of the HVAC system, requires no continual adjustment or maintenance except a replacement of the bi-polar ion tube every 2 years.

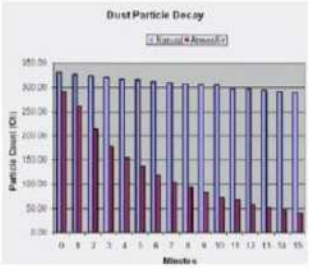
In laboratory testing AtmosAir systems have shown significant contaminant reduction capabilities. The active process of the ions saturating the space to get to the source of contamination shows great efficiency when compared to passive technologies that must bring the contaminant to the device to be affected. *See the below chart of comparison testing of CADR rate (Clean Air Delivery Rate):*

Technology	CADR Rate
AtmosAir B-Polar Ionization	125
Lennox Photo Catalytic Oxidation	47.4
Honeywell Electronic Air Cleaner	35.8
Emerson Polarized Media Filter	27.2
Sharper Image Ionic Breeze	4.8
GPS Needlepoint Ionizer	1.3
Activetek PCO	-3.9

Source: Intertek ETL

Testing was performed to standard ASNI/AHAM AC-1-2002. Testing rated relative performance on .3 micron particles in a standard 10"x10'x10' chamber.

AtmosAir systems have shown good performance on dust particles, VOC's and micro-organisms both in air and on surfaces, see below some testing charts from this technology:



Source: Intertek ETL

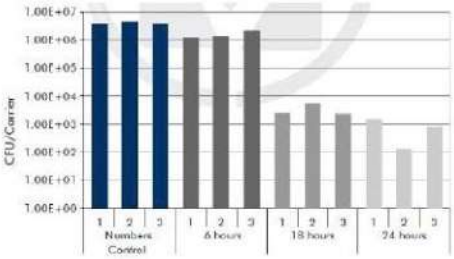
Testing was performed to standard ASNI/AHAM AC-1-2002. Testing showed performance on .3 micron particles in a standard 10"x10'x10' chamber. Without AtmosAir a 12.8% natural decay rate was measured while with AtmosAir supplying ions to the chamber an 85.8% decay rate was measured.

AtmosAir TVOC Testing

Test Site	Percentage Reduction
Kilroy Realty	79%
Hyatt Hotel	95%
Staples Center	90%
Santa Ana Schools	97%
USC	97%
Rivers Casino	90%

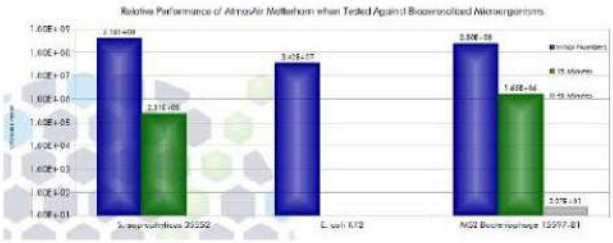
Source: Aircuity Inc, EMSL Analytical, Healthy Buildings International, DTS Environmental

TVOC levels as well as fixed gas levels were measured using Aircuity Optima monitors, EPA TO-15 and EPA TO-17 method analyzed by capillary gas chromatography and mass spectroscopy



Source: Microchem Laboratory, Round Rock, TX

Clostridium Difficile (C-Diff) was studied to see the affect of AtmosAir bi-polar ions. After 24 hours the percentage reduction was 99.98% when compared to the control group, a 3.64 log reduction.



Source: AntiMicrobial Test Labs, Round Rock, TX

Staphylococcus Saprophyticus, Escherichia coli and MS2 Bacteriophage were aerosolized in a test chamber and a control group and test group were studied. All three organisms showed a 99% reduction after only 15 minutes of exposure to AtmosAir bi-polar ions when compared to a control group

Combined with the ability to provide cleaner and healthier air is also the ability for **AtmosAir systems to enable a building to save energy**. When air quality and the typical contaminants are considered and a proven strategy is used to control those contaminants (per ASHARE 62.1 IAQ Procedure) ventilation code required outside air introduction can be reduced and greater volumes of already conditioned air can be re-circulated. This allows a building's air handlers to cycle less and run for shorter durations and well as chillers and / or condensing units. This can **enable significant HVAC energy savings sometimes up to 20%** which, in turn, will impact the overall electrical and gas, oil or generated steam cost.

This strategy has been proven in several studies. **The US Army in a project co-sponsored by DOE conducted a study with AtmosAir** and reducing outside air need in a test building. The study concluded that a reduction of outside air from 40 cfm (cubic feet per minute) per person occupancy down to 5 cfm per person combined with AtmosAir

resulted in overall improved air quality in particles, spores and VOC levels while showing a reduction in HVAC power demand of 23%. This resulted in over 50 full-scale building integrations and growing. In a similar case study, **Staples Center in Los Angeles, CA studied AtmosAir** along with a strategy that included reduction of outside air by 50% and downsizing media filters from MERV 14 to 11. The study showed overall better air quality with particle and VOC reductions and HVAC power demand decrease of 21%. This study led to a full-scale integration of AtmosAir and reduced outside air and downsized filters throughout the entire arena. Because Bi-polar ionization will go to the source of contamination, a larger percentage of particles are affected than with filter systems. It has the effective filtering capacity of MERV 13 filtration without the static load on the air system.

Comparative Cost Savings and Simple Installation:

The AtmosAir technology can enable significant cost reductions when compared to the cost of HVAC equipment. Typically HVAC equipment costs approx $1,500 per ton with a ton being equal to 400 supply cfm capacity or approx 400 square feet capacity so cost would be $3.75 per cfm or square foot. A bi-polar ion system installed costs approx .80 per cfm or per square foot, so bi-polar ionization with its ability to reduce outside air and the tonnage needed to condition that air, provides a cost effective solution to providing good IAQ in buildings. Overall energy use in a typical building is 50% HVAC related and of that HVAC energy use is over 50% from having to condition outside air so the energy savings impact is substantial. Also AtmosAir systems are very easy to integrate into new or existing HVAC systems. Systems can be easily installed into the main supply duct of the HVAC system so the bi-polar ion tubes can be inserted into the supply airflow and saturate the interior with bi-polar ions. A typical system that can serve up to 15,000 square feet can be installed in under an hour. Also the same system uses less than 50 watts of power to operate and imparts a negligible static pressure on the airflow, so these systems do not impose an energy penalty by their use as adsorbent technologies such as carbon filters or other types of air scrubber systems will by their operation. When compared to a high efficiency filter for cost of operation, AtmosAir systems will cost 90% less to operate due to the low airflow restriction and operating cost.

Some Additional Supportive Research

As previously mentioned nosocomial infections in hospitals, especially with highly antibiotic resistant germs, infect about a million patients annually, killing about 75,000 of them at a cost of about $2 billion. Several published studies have shown the usefulness of bipolar ionization controlling airborne bacterial populations. For example, there is ample evidence that airborne route of transmission is important in the epidemiology of several nosocomial bacteria including *Acinetobacter* spp infections (8). Multiple antibiotic resistant *Acinetobacter spp* have emerged as a significant health-care associated infection (nosocomial) and these microbes usually become endemic throughout the hospital (9). The above cited study reported that *Acinetobacter* spp cases were reduced from 11 to 2 ($p= 0.007$) using bipolar ionization. Further, this study reported that it is clear that ionization has a likely role in prevention of *Acinetobacrter* infections (8).

There is growing evidence that bioaerosols can be generated in an indoor setting by ventilation or air conditioning systems, dust or shed skin disturbance, coughs, and sneezes among others (10, 11). Several other studies have demonstrated that hospital activities,

such as bed making, caused significant aerosolization of methicillin-resistant *Staphylococcus aureus* (12, 13). Even nurses polypropylene aprons, along with other plastic materials used in a healthcare setting generated static electric fields and collected high numbers of microbes (14). Another study reported that when surgeons perform endoscopic surgery they frequently point to a video monitor during the procedure and they found that bacteria grew when a gloved hand passed within 4 cm of the monitor but not beyond 8 cm distance (15). In another study, a 40-50 % reduction in microbial air pollution was found after employing a 13.5 kV corona-type ion generator every second week in a dental clinic (16). Similar types of studies have been conducted for non-biological particles in the semiconductor industry. Another major study evaluated the effect of surface charge and air ionization on deposits of airborne bacteria (17). They found that implementation of bipolar ionization resulted reduction of bacterial deposition. This is important because static charges on fomite surfaces may attract resulting deposition in excess of that expected by gravitational sedimentation or simple diffusion (17). Their findings suggest that highly charged bioaerosols and materials used in patient setting may represent an important new avenue for exploration and research into reduction of hospital-acquired infections.

Airborne movement of dust, and other particulates has frequently been implicated as a potential mechanism for transmitting *Salmonella enteritidis* infection in poultry houses (18). In order to determine whether air ionization would affect airborne transmission of *S. enteritidis*, baby chicks were housed in four controlled–environment isolation cabinets in which airflow was directed across an unoccupied central area from one ("upstream") group of birds to another ("downstream") group (18). Ionizers were installed in two of the caninets. In three replicate trails, groups of chicks were placed in the upstream end of the transmission cabinets and orally inoculated with *S. enteritidis* at one week of age. On the following day, 1-day-old chicks were placed in the downstream end of the cabinets. When chicks were sampled at 3 and 8 days post-inoculation, *S. enteritidis* was found on the surface of 89.6% of the downstream chicks from cabinets without negative air ionizers, but on only 39.6% of the downstream chicks in the presence of the ionizers. Most importantly, *S.enteritidis* was recovered from the ceca of 53.1% of sampled downstream chicks in cabinets without ionizers, but only 1 % of the ceca of chicks in cabinets with ionizers installed (18).

Studies of the effects of ionization on bacterial aerosols in a burns and plastic surgery unit were studied (19). It is known that the microbial contamination of the air in burn units is high (20). A classic study demonstrated in single rooms where isolated patients were nursed, the ionization experiments of 24 h periods with -5kV showed lower sedimentation bacterial counts during ionization on two repeated occasions (19). The total colony counts represent contamination due to staff and patients. Phage typed finger-printing of *Staphylococcus aureus* strains in the air indicate shedding by individual patients. Although the sheath bacteria-carrying epithelial cells is large, the number of *S. aureus* bearing particles was significantly decreased by ionization. Clearly the number of *S. aureus* shed by patients in presented cases was also lower during the ionization (19). In a similar study, researchers performing experiments with animal respiratory diseases caused by Newcastle disease virus suggested that contamination of the air by droplets that carry other bacteria like *Mycobacterium tuberculosis, Mycoplasma pneumonia*, and other microbes (like *Legionella pneumophila*), may also be prevented by ionization of the air (21). They suggest that ionization of air may prove to be an alternative to increased air ventilation and filtration (21).

Air ionization has a long history of varied applications. In one published review article on the ionization of air for removal of "noxious effluvia", a presentation of recent developments in the application of controllable air ionization processes that apply dielectric-barrier discharge devices to generate non-thermal plasmas have led to applications for chemical and biological decontamination in indoor environments (22). These include significant reductions in airborne microbes, neutralization of odors, and reduction of VOCs. Also removal of very fine particulates (PMx) is also enhanced by air ionization. The physics and chemistry of air ionization, and its utility for contributing to significant improvements in indoor air are discussed in detail (22).

The efficacy of bipolar ionization technology against a wide variety of pathogens was confirmed through collaborative research (23). Efficacy in inhibiting of airborne target substances noted below was verified by exposing those organisms to an ion concentration of at least 3000 ions/cm3. Effective kill was achieved in seconds to minutes dependent upon the microbe, the exposure time, and the concentration of ions. Studies have shown that a more rapid kill-time can be achieved by increasing concentration of ions. For example, Sharp Corporation studies in collaboration with Retroscreen Virology Ltd demonstrated that the highly pathogenic H5N1 avian influenza virus could be inactivated by 99.9% in ten minutes using a high bipolar ion concentration of 50,000 ions/cm3 (24). Sharp has also shown that reduction by 99% could be achieved in ten minutes at a concentration of 7000 ions/cm3 (24). It is very important to understand that during actual real-time in-use conditions, bipolar ionization systems perform in a continuous steady fashion with continuous disinfection so that large bolus concentrations are unnecessary for effectiveness.

The results of a series of studies are summarized in the chart below (23, 24):

John Oxford's Efficacy of Bi-Polar Ionization on Various Pathogens		
Target Substance	**Species**	**Testing and Verification Organization**
Fungi	Cladosporium (black mold, mildew)	Ishikawa Health Service Association
		Universitätklinikums Lübeck University Clinic (Germany) (proliferation control effect)
		CT&T (Professor Gerhard Artmann, Aachen University of Applied Sciences)
	Penicillium, Aspergillus	Universitätklinikums Lübeck University Clinic (Germany) (proliferation control effect)
	Aspergillus, Penicillium (two species), Stachybotrys, Alternaria, Mucorales	CT&T (Professor Gerhard Artmann, Aachen University of Applied Sciences)
Bacteria	Coliform bacteria (E. Coli)	Ishikawa Health Service Association
	E. coli, Staphylococcus (aureus), Candida	Shanghai Municipal Center for Disease Control and Prevention, China
	Bacillus subtilis	Kitasato Research Center of Environmental Sciences
		CT&T (Professor Gerhard Artmann, Aachen University of Applied Sciences)
	MRSA (methicillin- resistant Staphylococcus aureus)	Kitasato Research Center of Environmental Sciences
		Kitasato Institute Medical Center Hospital
	Pseudomonas, Enterococcus, Staphylococcus	Universitätklinikums Lübeck University Clinic (Germany) (proliferation control effect)
	Enterococcus, Staphylococcus, Sarcina, Micrococcus	CT&T (Professor Gerhard Artmann, Aachen University of Applied Sciences)
Viruses	H1N1 influenza virus	Kitasato Research Center of Environmental Sciences
		Seoul University, Korea
		Shanghai Municipal Center for Disease Control and Prevention, China
		Kitasato Institute Medical Center Hospital
	H5N1 avian influenza virus	Retroscreen Virology, Ltd.
	Coxsackie virus (summer colds)	Kitasato Research Center of Environmental Sciences
	Polio Virus	Kitasato Research Center of Environmental Sciences
	Corona Virus	Kitasato Institute Medical Center Hospital
Allergens	Mite allergens (dead bodies and feces)	Hiroshima University
	Pollen	Hoshima University

Air ionization, although historically well documented and technologically well advanced, is just now entering the field of treatment of specific targets in indoor environments, which directly affect the IAQ and bring with it the potential for associated health benefits!

References:

1) US-EPA – Indoor Air Quality, www.epa.gov/IAQ, 2016.

2) NIOSH – Indoor Environmental Quality.cdc.gov.retrieved 2012-03-02

3) US-EPA - Improve Indoor Air Quality in Schools | Improving Air Quality in 2016-02-21
https://archive.epa.gov/airquality/community/web/html/i-schools.html
Information on Improving Air Quality in Your Community

4) Indoor air pollution - World Health Organization
*www.who.int/indoorair/publications/en/*17 March 2016; *Indoor air quality* guidelines: household fuel combustion 24 November 2014; Selected pollutants: WHO guideline for *indoor air quality.*

5) IAQ - Introduction to Indoor Air Quality - US EPA
https://www.epa.gov/indoor-air-quality-iaq/introduction-indoor-air-quality

6) Tierno, PM. Protect Yourself Against Bioterrorism. Pocket Books Division of Simon & Schuster, New York, 2002.

7) Tierno, PM. The Secret Life of Germs. Atria Book Division of Simon and Schuster, New York, 2001.

8) Kerr, KG, Beggs CB, et al. Air Ionization and Colonization/Infection with Methicillin-resistant S. aureus and Acinetobacter species in an Intensive Care Unit. Intensive Care Med 134:315-31, 2006.

9) Marais E, de Jong G, et al. Interhospital Transfer of Pan-resistant Acinetobacter strains in Johannesburg, South Africa. Am J Infect control. 32:278-28, 2004.

10) Schaal, KP. Medical and Microbiological Problems Arising from Airborne Infections in Hospital. J Hosp Infect 18:451-459, 1991.

11) Beggs CB. The Airborne Transmission of Infection in Hospital Buildings: Fact or Fiction? Indoor Built Envioron 12: 9-18, 2003.

12) Overton E. Bedmaking and Bacteria. Nurs Times 84:69-71, 1988.

13) Shiomori T, et al. Evaluation of Bedmaking-related Airborne and Surface Methicillin-resistant S. aureus Contamination. J Hosp Inf 50:30-55, 2002.

14) Allen J, et al. Static Electric Fields as a Mediator of Hospital Infection. Indoor Built Environ 15:49-52, 2006.

15) Becker, R, et al. Static Electricity as a Mechanism of Bacterial Transfer During Endoscopic Surgery. Surg Endosc 10:397-399, 1996.

16) Gabbay J et al. Effect of Ionization on Microbial Air Pollution in the Dental Clinic. Environ Res 52:99-106, 1990.

17) Meschke S, et al. The Effect of Surface Charge, Negative and Bipolar Ionization on the Deposition of Airborne Bacteria. J Appl Microbiol 106:1133-1139, 2009.

18) Gast RK, et al. Application of Negative Ionization for Reducing Experimental Airborne Transmission of Salmonella enteritidis to Chicks. Poultry Science 78:57-61, 1999.

19) Makela P, et al. Studies on the Effects of Ionization on Bacterial Aerosols in a Burns and Plastic Surgery Unit. J Hyg (London) 83:199-208, 1978.

20) Hambraeus A. Studies on the Transmission of Staphylococcus aureus in an Isolation Ward for Burned Patients. J Hyg 71:171-175, 1973.

21) Estola T, et al. The Effect of Air Ionization on the Air-borne Transmission of Experimental Newcastle Disease Virus Infections in Chickens. J Hyg 83:59-66, 1979.

22) Daniels SL. On the Ionization of Air for Removal of Noxious Effluvia. IEEE transaction on Plasma Science, 30:1471-1481, 2002.
23) Oxford JS. Efficacy of Cluster Ions on Various Pathogens Confirmed Through Collaborative Research. Retroscreen Virology, Ltd, London UK, PC: 2017.

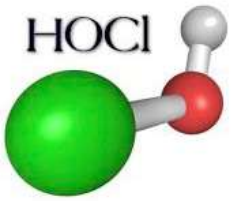
24) Sharp-world.com/corporate/news/080827.html, 2009.

About the author

Dr. Tierno is Professor of Microbiology and Pathology at NYU School of Medicine and NYU Langone Medical Center. Dr. Tierno also serves on the Global Hygiene Council. Dr. Tierno is the author of the book, The Secret Life of Germs, and has authored or co-authored several other publications. Dr. Tierno has served on the New York City Mayor's Task Force on Bio Terrorism.

Appendix 4: About Hypochlorous Acid

About Hypochlorous Acid



Hypochlorous acid is naturally produced by white blood cells of all mammals. It plays an important role in the immune system killing pathogens through oxidation and chlorination.

Hypochlorous acid can also be produced through a process called electrolysis. Electrolysis is a technique that uses a direct electric current (DC) to drive an otherwise non-spontaneous chemical reaction. Specifically engineered electrolysis cells can generate a solution of free chlorine species by running electricity through NaCl (table salt) and water. The oxidants hypochlorous acid (HOCl) and hypochlorite (OCl-) are formed at the anode. If the pH of the solution is weakly acidic to neutral, the free chlorine solution will be dominated by hypochlorous acid.

> Hypochlorous is a powerful oxidant and is 100 times more efficient at killing microbial pathogens than sodium hypochlorite (aka: chlorine bleach).

New Technology & Research

The use of chlorine for disinfection has been researched for over 100 years. It has been an undisputable fact that hypochlorous acid offers far superior disinfecting properties than sodium hypochlorite (chlorine bleach). One of the most well known authorities for the use of chlorine as a disinfectant is *White's Handbook of Chlorination*. This book is comprehensive in explaining the chemistry and effectiveness of chlorine and alternative disinfectants.

The challenge has been in engineering a system for producing a free chlorine solution that is dominated by the molecule of hypochlorous acid (HOCl) rather than sodium hypochlorite (NaOCl-). The development of electrolysis cells for generating electrolyzed water became a huge innovative breakthrough in the 1970s. Since then, improvements in electrolysis cells have been made that can generate a solution of free chlorine that is near 99% hypochlorous acid and that is stable.

One of the most recent improvements has been the development of single cell technology to replace membrane cell technology allowing for the production of just one stream of solution at a near neutral pH. Prior technology used membranes and high pressures that forced two streams to be generated, an unstable anolyte of hypochlorous acid and an unstable catholyte of sodium hydroxide. With the development of single cell technology, a stable solution of just anolyte can be produced yielding a solution of near 99% stable hypochlorous acid.

Over 30 years of research exisits for the use of hypochlorous acid and new research is being published every year. Recent research has focused on the use of hypochlorous acid for sanitizing food and food processing facilities. Research has also been done on poultry farms, water treatment and disinfection, and healthcare related applications such as wound care and equipment sterilization.

Search over 300 published research articles on the use of hypochlorous acid.

Research Database

Safe on Eyes and Skin

Hypochlorous acid does not cause irritation to eyes and skin. Even it were ingested it causes no harm. Because it is so safe, it is the ideal sanitizer for direct food sanitation and food contact surfaces. It is also ideal in healthcare where it is used for wound cleansing, eye drops, and patient room disinfection replacing toxic chemicals such as bleach and quaternary ammonium (quats).

Non-Toxic, Non-Hazardous

Sanitation chemicals distributed in concentrated form are toxic and can be hazardous. Contact with skin or inhalation of fumes can cause irritation. These risks do not exist with hypochlorous acid. Electrolyzed water systems generate hypochlorous acid from just table salt, water and electricity. No personal protective gear is required.

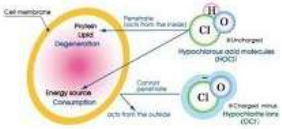
How does HOCl kill microbial pathogens?

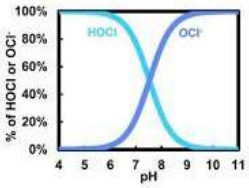
The molecule of hypochlorous acid is HOCl. This molecule is unique in that it is neutrally charged unlike hypochlorite (OCl-) which is negatively charged. So why is this important?

Disinfectants and microbial pathogens interact with each other similar to magnets. If you bring together two negatively charged magnets, they will repel each other. Bacteria and hypochlorite (OCl- aka. bleach) are both negatively charged and behave like two negatively charged magnets repelling each other. Hypochlorous acid (HOCl) is neutrally charged and is not repelled by bacteria. HOCl easily penetrates the walls of the bacteria and destroys them with its strong oxidation potential.

Why is pH important?

A free available chlorine (FAC) molecule is one that is not attached. There are three forms of free available chlorine: chlorine gas, hypochlorous acid and hypochlorite. Assuming a constant temperature of 25 degrees Celsius, when the pH is below 3, free chlorine will leave solution as chlorine gas. When the pH is above 7.5, over 50% will be hypochorite (OCl-) and will increase in hypochlorite as it rises toward pH 14. Between pH 3 and pH 7.5 the free chlorine solution will be dominated by hypochlorous acid (HOCl).





Appendix 5: Interim Cleaning and Disinfection Guidance for Primary and Secondary Schools for COVID-19

NEW YORK STATE OF OPPORTUNITY. | Department of Health

ANDREW M. CUOMO
Governor

HOWARD A. ZUCKER, M.D., J.D.
Commissioner

SALLY DRESLIN, M.S., R.N.
Executive Deputy Commissioner

Interim Cleaning and Disinfection Guidance for Primary and Secondary Schools for COVID-19

Background:
In December 2019, a new respiratory disease called Coronavirus Disease 2019 (COVID-19) was detected in China. COVID-19 is caused by a virus (SARS-CoV-2) that is part of a large family of viruses called coronaviruses.
To help prevent spread of COVID-19, schools should continue to educate students, faculty and staff about proper hand and respiratory hygiene.

What steps should schools in NYS take for COVID-19?

Now:
Schools should continue performing routine cleaning. Specific high-risk locations warrant cleaning and disinfection at least daily.

If an individual with laboratory confirmed COVID-19 was symptomatic in a school-setting:
Cleaning and disinfection throughout the school.

Hand hygiene:

- Regular hand washing with soap and water for at least 20 seconds should be done:
  - Before eating;
  - After sneezing, coughing, or nose blowing;
  - After using the restroom;
  - Before handling food;
  - After touching or cleaning surfaces that may be contaminated; and
  - After using shared equipment like computer keyboards and mice.

If soap and water are not available, use an alcohol-based hand sanitizer. School medical directors should approve and permit the use of alcohol-based hand sanitizers in their facilities without individual's physician orders as alcohol-based hand sanitizers are considered over-the-counter drugs. Student use of alcohol-based hand sanitizers should always be supervised by adults. Parents/guardians can inform the school that they do not want their child to use alcohol-based hand sanitizers by sending a written notice to the school.

Respiratory hygiene:

- Covering coughs and sneezes with tissues or the corner of elbow; and
- Disposing of soiled tissues immediately after use.

Routine Cleaning:
Soiled and frequently touched surfaces can be reservoirs for pathogens, resulting in a continued transmission to people. Therefore, for pathogenic microorganisms that can transmit disease through indirect contact (transmission through contaminated surfaces), extra attention must be paid to surfaces that are touched most often by different individuals. **As part of standard infection control practices in school settings, routine cleaning should be continued.**

In New York State, all primary and secondary schools are required to use green cleaning products. For additional information on the laws regarding the use of green cleaning products, see the Policies, Guidelines and Report section of NY's Green Cleaning Program website. Routine cleaning of school settings include:

- Cleaning high contact surfaces that are touched by many different people, such as light switches, handrails and doorknobs/handles.
- Dust- and wet-mopping or auto-scrubbing floors.
- Vacuuming of entryways and high traffic areas.
- Removing trash.
- Cleaning restrooms.
- Wiping heat and air conditioner vents.
- Spot cleaning walls.
- Spot cleaning carpets.
- Dusting horizontal surfaces and light fixtures.
- Cleaning spills.

Specific high-risk locations within a school warrant cleaning and disinfection before a confirmed case of COVID-19 occurs in the school.

Examples of these locations include:

Health Office
- Clean and disinfect health cots regularly (after each student use)
- Cover treatment tables and use pillow protectors
- Discard or launder coverings after each use

Lunchrooms
- Clean and disinfect lunch tables regularly (at least once daily)

Athletic Rooms
- Establish a regular cleaning schedule for shared environmental surfaces such as wrestling mats or strength-training equipment
- Disinfect mats and other high-use equipment at least daily

Other Frequently Touched Surfaces
- Clean and disinfect frequently touched surfaces at least once daily after students have left for the day

Cleaning and Disinfection:
Cleaning removes germs, dirt and impurities from surfaces or objects, while disinfecting kills germs on surfaces or objects. **If a laboratory confirmed case of COVID-19 was symptomatic while in the school setting, custodial staff should perform cleaning and disinfection of frequently touched areas throughout the school.**

Step 1: Cleaning: Always clean surfaces prior to use of disinfectants in order to reduce soil and remove germs. Dirt and other materials on surfaces can reduce the effectiveness of disinfectants. For combination products that can both clean and disinfect, always follow the instructions on the specific product label to ensure effective use. In New York State, all primary and secondary schools, state agencies, and state authorities are required to use green cleaning products. For additional information on the laws regarding the use of green cleaning products, see the Policies, Guidelines and Report section of NY's Green Cleaning Program website.

Step 2: Disinfection: Cleaning of soiled areas must be completed prior to disinfection to ensure the effectiveness of the disinfectant product. **NYS Green Cleaning Program does not address the use of disinfection products. Disinfection products may be used in school settings as needed at any time.** If EPA- and DEC*-registered products specifically labeled for SARS-CoV-2 are not available, disinfect surfaces using a disinfectant labeled to be effective against rhinovirus and/or human coronavirus. If such products are unavailable, it is also acceptable to use a fresh 2% chlorine bleach solution (approximately 1 tablespoon of bleach in 1 quart of water). Prepare the bleach solution daily or as needed. EPA- and DEC*- registered disinfectants specifically labeled as effective against SARS-CoV-2 may become commercially available at a future time and once available, those products should be used for targeted disinfection of frequently touched surfaces.

Examples of frequently touched areas in schools:

- Classroom desks and chairs;
- Lunchroom tables and chairs;
- Door handles and push plates;
- Handrails;
- Kitchen and bathroom faucets;
- Light switches;
- Handles on equipment (e.g., athletic equipment);
- Buttons on vending machines and elevators;
- Shared telephones;
- Shared desktops;
- Shared computer keyboards and mice; and
- Bus seats and handrails.

Note: Computer keyboards are difficult to clean due to the spaces between keys and the sensitivity of its hardware to liquids. When shared, they may contribute to indirect transmission. Locations with community use computers should provide posted signs regarding proper hand hygiene before and after using the computers to minimize disease transmission. Also, consider using keyboard covers to protect the hardware against spills and facilitate cleaning.

- Label directions must be followed when using disinfectants to ensure the target viruses are effectively killed. This includes adequate contact times (i.e., the amount of time a disinfectant should remain on surfaces to be effective), which may vary between five and ten minutes after application. Disinfectants that come in a wipe form will also list effective contact times on their label.
- For disinfectants that come in concentrated forms, staff should carefully follow instructions for making the diluted concentration needed to effectively kill the target virus. This information can be found on the product label.

Disinfecting is the responsibility of school custodial staff. They are trained to use disinfectants in a safe and effective manner. Staff are reminded to ensure procedures for safe and effective use of all products are followed. Staff do not need to wear respiratory protection (e.g., masks) while cleaning. Safety instructions are listed on product labels and include the personal protective equipment (e.g., gloves) that should be used. Place all used gloves in a bag that can be tied closed before disposing of them with other waste. Wash hands with soap and water for at least 20 seconds immediately after removing gloves or use an alcohol-based hand sanitizer if soap and water are not available. Soap and water should be used if hands are visibly soiled.

*NYSDEC registration will not be listed on disinfection product labels. Information about disinfection product registration with NYSDEC can be found at: http://www.dec.ny.gov/nyspad/products. If you have any questions about NYSDEC pesticide registration, please call the NYSDEC Bureau of Pesticide Management at 518-402-8748.

More information:
New York State Department of Health's COVID-19 Webpage:
https://www.health.ny.gov/diseases/communicable/coronavirus/

Centers for Disease Control and Prevention Webpage:
https://www.cdc.gov/coronavirus/2019-ncov/

New York State Green Cleaning Program:
https://greencleaning.ny.gov/

Enhanced Green Cleaning Guidance To Reduce The Spread Of Communicable Disease:
https://greencleaning.ny.gov/DownloadCenter/Files/EnhancedGreenCleaningTrainingManual5_17_10.pdf

Appendix 6: Proper Hand and Respiratory Hygiene

Appendix 7: Homestead Cleaning Logs

Date_____	12pm	Other time
Floors		
Tables		
Materials on shelves		
Shelves		
Keyboards, screens		
Remotes		
Doorknobs		
Recycling		
Trash		
Telephone		
Employee supplies (clipboards, writing utensils)		
Student Supplies (if any)		
Railings		
Mirrors		
Other (Kitchen equipment, napmats)		
Other:		
Other:		

Date_____	8am	12pm	3pm
Floors			
Sinks			
Toilet & TP dispensers			
Mirrors			
Soap Dispensers			
Dryers			
Trash			
Doorknobs			

Type of Equipment	Date and Time of cleaning	by

Appendix 8: Cleaning and Disinfecting Your Facility

Cleaning And Disinfecting Your Facility

Everyday Steps, Steps When Someone is Sick, and Considerations for Employers

How to clean and disinfect

Wear disposable gloves to clean and disinfect.

Clean

- **Clean surfaces using soap and water.** Practice routine cleaning of frequently touched surfaces.

High touch surfaces include:

Tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets, sinks, etc.

Disinfect

- Clean the area or item with soap and water or another detergent if it is dirty. Then, use a household disinfectant.
- **Recommend use of EPA-registered household disinfectant. Follow the instructions on the label** to ensure safe and effective use of the product.

Many products recommend:

- Keeping surface wet for a period of time (see product label).
- Precautions such as wearing gloves and making sure you have good ventilation during use of the product.

- **Diluted household bleach solutions may also be used** if appropriate for the surface. Check to ensure the product is not past its expiration date. Unexpired household bleach will be effective against coronaviruses when properly diluted.

Follow manufacturer's instructions for application and proper ventilation. Never mix household bleach with ammonia or any other cleanser.

Leave solution on the surface for **at least 1 minute**

Bleach solutions will be **effective** for disinfection **up to 24 hours.**

To make a bleach solution, mix:

- 5 tablespoons (1/3rd cup) bleach per gallon of water

  OR

- 4 teaspoons bleach per quart of water

- **Alcohol solutions with at least 70% alcohol.**

Soft surfaces

For soft surfaces such as **carpeted floor, rugs, and drapes**

- **Clean the surface using soap and water** or with cleaners appropriate for use on these surfaces.

CDC

cdc.gov/coronavirus

- **Launder items** (if possible) according to the manufacturer's instructions. Use the warmest appropriate water setting and dry items completely.

OR

- **Disinfect with an EPA-registered household disinfectant.** These disinfectants meet EPA's criteria for use against COVID-19.

Electronics

- For electronics, such as **tablets, touch screens, keyboards, remote controls, and ATM machines**
- Consider putting a **wipeable** cover on electronics.
- **Follow manufacturer's instruction** for cleaning and dinfecting.
  - If no guidance, **use alcohol-based wipes or sprays containing at least 70% alcohol**. Dry surface thoroughly.

Laundry

For clothing, towels, linens and other items

- Launder items according to the manufacturer's instructions. Use the **warmest appropriate water setting** and dry items completely.
- **Wear disposable gloves** when handling dirty laundry from a person who is sick.
- Dirty laundry from a person who is sick **can be washed with other people's items**.
- **Do not shake** dirty laundry.
- Clean and **disinfect clothes hampers** according to guidance above for surfaces.
- **Remove gloves,** and wash hands right away.

Cleaning and disinfecting your building or facility if someone is sick

- **Close off areas** used by the person who is sick.

- **Open outside doors and windows** to increase air circulation in the area. **Wait 24 hours** before you clean or disinfect. If 24 hours is not feasible, wait as long as possible.
- Clean and disinfect **all areas used by the person who is sick**, such as offices, bathrooms, common areas, shared electronic equipment like tablets, touch screens, keyboards, remote controls, and ATM machines.
- If **more than 7 days** since the person who is sick visited or used the facility, additional cleaning and disinfection is not necessary.
  - Continue routing cleaning and disinfection.

When cleaning

- **Wear disposable gloves and gowns for all tasks in the cleaning process, including handling trash.**
  - Additional personal protective equipment (PPE) might be required based on the cleaning/disinfectant products being used and whether there is a risk of splash.
  - Gloves and gowns should be removed carefully to avoid contamination of the wearer and the surrounding area.
- **Wash your hands often** with soap and water for 20 seconds.
  - Always wash immediately after removing gloves and after contact with a person who is sick.

- Hand sanitizer: If soap and water are not available and hands are not visibly dirty, an alcohol-based hand sanitizer that contains at least 60% alcohol may be used. However, if hands are visibly dirty, always wash hands with soap and water.

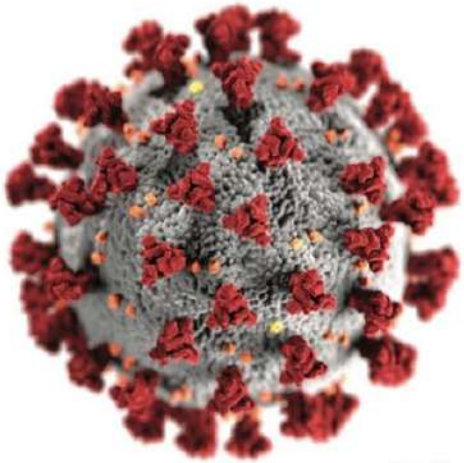
- **Additional key times to wash hands** include:
  - After blowing one's nose, coughing, or sneezing.
  - After using the restroom.
  - Before eating or preparing food.
  - After contact with animals or pets.
  - Before and after providing routine care for another person who needs assistance (e.g., a child).

Additional Considerations for Employers

- **Educate workers** performing cleaning, laundry, and trash pick-up to recognize the symptoms of COVID-19.
- Provide instructions **on what to do if they develop symptoms within 14 days** after their last possible exposure to the virus.
- Develop **policies for worker protection and provide training** to all cleaning staff on site prior to providing cleaning tasks.
  - Training should include when to use PPE, what PPE is necessary, how to properly don (put on), use, and doff (take off) PPE, and how to properly dispose of PPE.
- Ensure workers are **trained on the hazards of the cleaning chemicals** used in the workplace in accordance with OSHA's Hazard Communication standard (29 CFR 1910.1200).
- **Comply** with OSHA's standards on Bloodborne Pathogens (29 CFR 1910.1030), including proper disposal of regulated waste, and PPE (29 CFR 1910.132).

For facilities that house people overnight:

- Follow CDC's guidance for colleges and universities. Work with state and local health officials to determine the best way to isolate people who are sick and if temporary housing is needed.
- For guidance on cleaning and disinfecting the bedroom/bathroom for someone who is sick, review CDC's guidance on disinfecting your home if someone is sick.



Appendix 9: Educational Videos and Resources about COVID and Emotional Resilience

Video Resources:

TEDEd The coronavirus explained and how you can combat it

Coronavirus: How to Teach Kids About COVID-19 | BrainPOP

Web Resources:

https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/talking-with-children.html

- Suggestions by Age Group:

  https://www.unicef.org/coronavirus/how-teachers-can-talk-children-about-coronavirus-disease-covid-19#preschool-guidance

https://www.tolerance.org/supporting-students-through-coronavirus

Science lessons:

https://www.lifeliqe.com/blog/teach-your-students-about-covid-19-with-lifeliqe-lessons/

- TEDEd Videos

  What is a coronavirus? - Elizabeth Cox

  When is a pandemic over?

Appendix 10: Regular Health Status Survey

Daily Home Screening for Students

Parents: Please complete this short check each morning and report your child's information [INSERT YOUR SCHOOL REPORTING INSTRUCTIONS] in the morning before your child leaves for school.

SECTION 1: Symptoms

If your child has any of the following symptoms, that indicates a possible illness that may decrease the student's ability to learn and also put them at risk for spreading illness to others. Please check your child for these symptoms:

☐	Temperature 100.4 degrees Fahrenheit or higher when taken by mouth;
☐	Sore throat;
☐	New uncontrolled cough that causes difficulty breathing (for students with chronic allergic/ asthmatic cough, a change in their cough from baseline);
☐	Diarrhea, vomiting, or abdominal pain
☐	New onset of severe headache, especially with a fever.

SECTION 2: Close Contact/Potential Exposure

☐	Had close contact (within 6 feet of an infected person for at least 15 minutes) with a person with confirmed COVID-19: OR
☐	Had close contact (within 6 feet of an infected person for at least 15 minutes) with person under quarantine for possible exposure to SARS-CoV-2; OR
☐	Traveled to or lived in an area where the local, Tribal, territorial, or state health department is reporting large numbers of COVID-19 cases as described in the Community Mitigation Framework
☐	New uncontrolled cough that causes difficulty breathing (for students with chronic allergic/ asthmatic cough, a change in their cough from baseline);
☐	Live in areas of high community transmission (as described in the Community Mitigation Framework) while the school remains open

Staff Regular Health Status Survey

Since your last survey:

1. Have you had any signs or symptoms of a fever such as chills, sweats, felt "feverish"?

____No ____Yes. If yes, explain: _____

2. Have you had a temperature of 100.0°F or greater?

____No ____Yes If yes, date/time of fever_____ and temperature °F____

3. Have you had any of the following symptoms or have had the following symptoms?

☐Cough
☐Shortness of Breath or Chest Tightness
☐Sore Throat
☐Nasal Congestion/Runny Nose
☐Myalgia (Body Aches)
☐Loss of Taste and/or Smell
☐Diarrhea
☐Nausea
☐Vomiting
☐Fever/Chills
☐Fatigue

____No ____Yes More info:_____

_____

4. Have you or anyone in your immediate family traveled internationally or outside of state or to a state with widespread community transmission of COVID-19?

____No ____Yes If yes, explain: _____

5. Have you or anyone in your immediate family had any close contact with someone with a diagnosis of COVID-19 or has had symptoms of COVID-19?

____No ____Yes If yes, explain: _____

6. Has a medical professional told you or anyone in your family to self-quarantine?

____No ____Yes If yes, explain: _____

You are obligated to inform Homestead School Administration if your answers to any of the above questions change before you complete the next regular health survey.

Thank you for your support in keeping the Homestead School community safe and healthy!

Appendix 11: Contact Tracing Tool

Contact Tracing Tool
for People Being Tested for COVID-19

If you test positive for COVID-19, you will get a call from a public health representative to identify any contacts you have had. This form can help you identify your contacts so you will be ready for the call.

STEP 1 **Identify date of first symptoms**
If you have had symptoms, put the date you first felt sick OR if you have had no symptoms then put your date of testing

_____/_____/_____

SUBTRACT 2 DAYS: _____/_____/_____ = YOUR CONTACT TRACING DATE

STEP 2 **Who has been in your house with you since your contact tracing date?**
Include people who live in your home, and people who may have visited like friends, a babysitter or anyone else providing in-home services.

	Name of Person	Date Last in Home	Their Phone Number
1			
2			
3			
4			
5			

STEP 3 **Make a list of what you did each day since your contact tracing date with as much detail as possible.**
Include things like hanging out with neighbors, going to work, running errands, appointments, social or recreational activities outside the house, and if you used public transportation to get there. Use another piece of paper if needed.

Day One: _____/_____/_____

Activity	Location	People you were with: Name	Address	Phone Number

Day Two: _____/_____/_____

Activity	Location	People you were with: Name	Address	Phone Number

Day Three: _____/_____/_____

Activity	Location	People you were with: Name	Address	Phone Number

Day Four: _____/_____/_____

Activity	Location	People you were with: Name	Address	Phone Number

Appendix 12: Interim Guidance for Public and Private Employees Returning to Work Following COVID-19 Infection or Exposure

Department of Health

ANDREW M. CUOMO
Governor

HOWARD A. ZUCKER, M.D., J.D.
Commissioner

SALLY DRESLIN, M.S., R.N.
Executive Deputy Commissioner

May 31, 2020

Interim Guidance for Public and Private Employees Returning to Work Following COVID-19 Infection or Exposure

Purpose

This interim guidance is intended to inform employers as restrictions on private and public sector activities are scaled back in different regions of the state throughout the COVID-19 public health emergency. This guidance is not intended for health care or nursing home professionals, which have separate protocols and guidance for staff to return to work. Specifically, this guidance provides protocols and policies for employees seeking to return to work after a suspected or confirmed case of COVID-19 or after the employee had close or proximate contact with a person with COVID-19.

Background

On March 7, 2020, Governor Andrew M. Cuomo issued Executive Order 202, declaring a state of emergency in response to COVID-19 as community transmission of the virus occurred throughout New York. To minimize further spread, social distancing of at least six feet must be maintained between individuals, where possible.

On March 20, 2020, Governor Cuomo issued Executive Order 202.6, directing all non-essential businesses to close in-office personnel functions. Essential businesses, as defined by Empire State Development Corporation (ESD) guidance, were not subject to the in-person restriction, but were, however, directed to comply with the guidance and directives for maintaining a clean and safe work environment issued by the New York State Department of Health (DOH).

On April 26, 2020, Governor Cuomo announced a phased approach to reopen industries and businesses in New York in phases based upon a data-driven, regional analysis. On May 4, 2020, the Governor provided that the regional analysis would consider several public health factors, including new COVID-19 infections, as well as health care system, diagnostic testing, and contact tracing capacity. On May 11, 2020, Governor Cuomo announced that the first phase of reopening would begin on May 15, 2020 in several regions of New York, based upon the previously identified regional metrics and indicators. On May 29, 2020, Governor Cuomo announced that the second phase of reopening would begin in several regions of New York.

Return to Work

As employers slowly begin to return employees back to the workplace, diligence must be paid to the health and safety of employees, especially for those employees that previously tested positive for COVID-19 or had close or proximate contact with a person with COVID-19 for a prolonged period of time.

Employers and employees should take the following actions related to COVID-19 symptoms or exposure:

- If an employee tests positive for COVID-19, regardless of whether the employee is symptomatic or asymptomatic, the employee may return to work upon completing at least 10 days of isolation from the onset of symptoms or 10 days of isolation after the first positive test if they remain asymptomatic.

- If an employee has had close or proximate contact with a person with COVID-19 for a prolonged period of time AND is experiencing COVID-19 related symptoms, the employee may return to work upon completing at least 10 days of isolation from the onset of symptoms.
    - The New York State Department of Health considers a close contact to be someone who was within 6 feet of an infected person for at least 10 minutes starting from 48 hours before illness onset until the time the person was isolated. The local health department should be contacted if the extent of contact between an individual and a person suspected or confirmed to have COVID-19 is unclear.
- If an employee has had close or proximate contact with a person with COVID-19 for a prolonged period of time AND is not experiencing COVID-19 related symptoms, the employee may return to work upon completing 14 days of self-quarantine.
    - However, if such an employee is deemed essential and critical for the operation or safety of the workplace, upon a documented determination by their supervisor and a human resources (HR) representative in consultation with appropriate state and local health authorities, the exposed, asymptomatic employee may return to work so long as the employee adheres to the following practices prior to and during their work shift, which should be monitored and documented by the employer and employee:
        1. Regular monitoring: The employee must self-monitor for a temperature greater than or equal to 100.0 degrees Fahrenheit every 12 hours and symptoms consistent with COVID-19 under the supervision of their employer's occupational health program.
        2. Wear a mask: The employee must wear a face mask at all times while in the workplace for 14 days after last exposure.
        3. Social distance: The employee must continue social distancing practices, including maintaining, at least, six feet of distance from others.
        4. Clean and disinfect workspaces: The employer must continue to regularly clean and disinfect all areas, such as offices, bathrooms, common areas, and shared electronic equipment.
        5. Maintain quarantine: The employee must continue to self-quarantine and self-monitor for temperature and symptoms when not at the workplace for 14 days after last exposure.
- If an employee is symptomatic upon arrival at work or becomes sick with COVID-19 symptoms while at the workplace, absent close or proximate contact with a person with COVID-19, the employee must be separated and sent home immediately and may return to work upon completing at least 10 days of isolation from the onset of symptoms OR upon receipt of a negative COVID-19 test result.

Additional Information

- New York Forward Reopening Webpage: https://forward.ny.gov/
- DOH COVID-19 Webpage: https://coronavirus.health.ny.gov/home
- CDC COVID-19 Webpage: https://www.cdc.gov/coronavirus/2019-nCoV/index.html