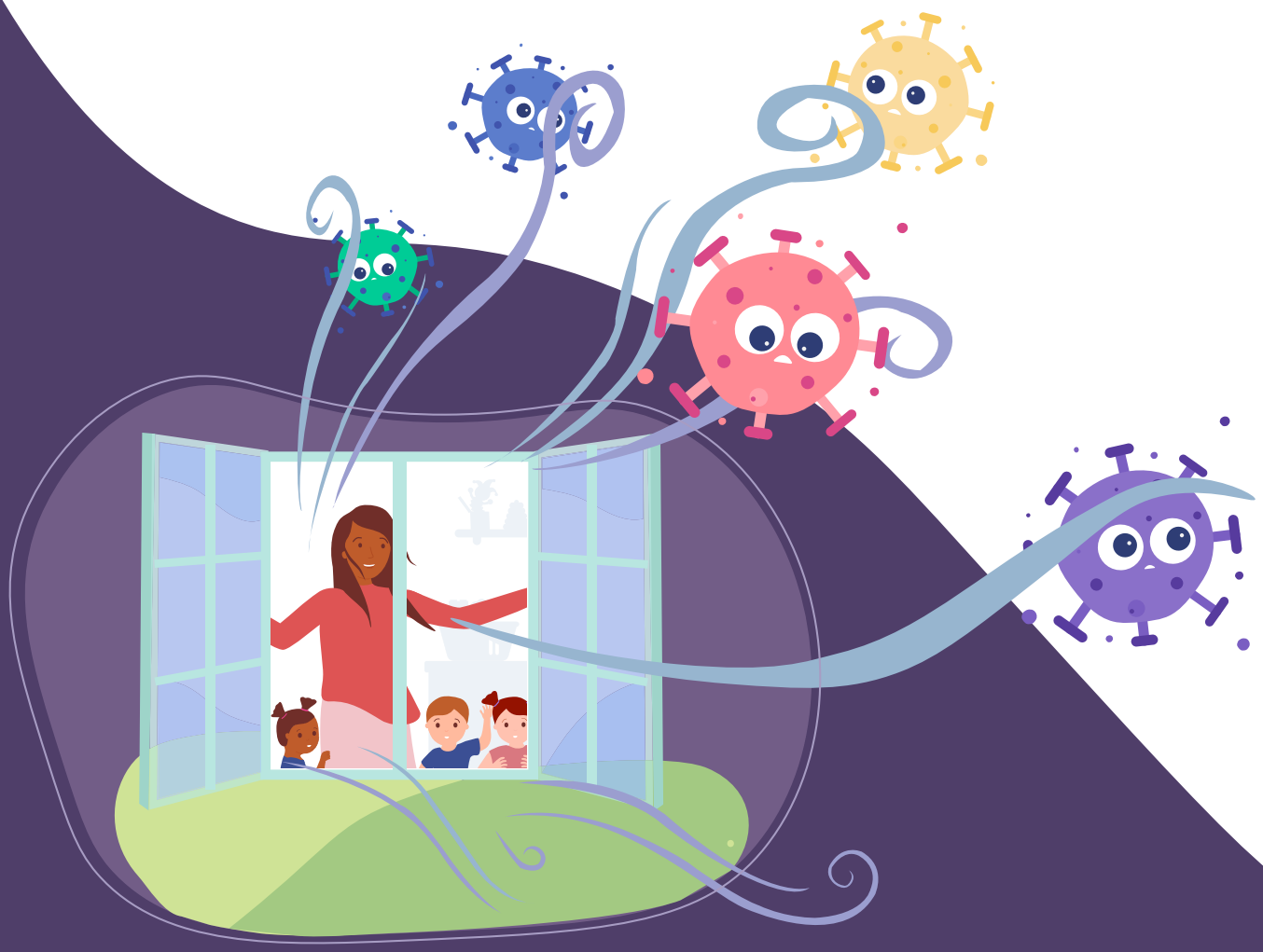
COVID-19 and Child Care

Simple Steps for Safer Ventilation



What's inside?

famly

What's this guide all about?

As an early educator, you and the children in your care deserve every bit of support to help you stay safe from the coronavirus. Good ventilation is part of that.

Having proper airflow through your classroom can significantly lower the risk of spreading the virus. So we've put this quick checklist together to guide you through what you need to know.

Why does fresh air help?

It's all about dilution. The coronavirus is an airborne disease. If you're sick, you'll breathe out little tiny virus particles, which can hang in the air for hours. The more virus particles that might be concentrated in your classroom, the easier it is for someone to breathe them in and get sick [1].
But if you're constantly mixing in fresh, clean air, that lowers your risk of breathing in enough bits of the virus to get sick. Think about the difference between putting a drop of food colouring into a glass of water, versus into a running stream.

Note: This isn't a cure-all.
Good ventilation helps, but it doesn't do everything. You should still keep up with your sanitization routines, and wear masks and practice social distancing whenever possible.

The value of ventilation beyond the pandemic

Good ventilation isn't just important for fighting the spread of the coronavirus. Decades of research suggest that fresh air can have a big impact on how children (and adults) grow and learn. Here's how:

Fresh air helps us stay healthy. Studies from schools and child care settings in California and Denmark found that better air ventilation correlates with reduced sick leave rates among children [2].

Fresh air makes us better learners. When we get better ventilation in elementary schools, we see a meaningful rise in students' test scores. The same goes for grown-ups' productivity in office buildings. Fresh air may carry similar benefits for the early learners at your child care setting [3].

Fresh air keeps children comfortable. Even if they might not be able to describe it, research suggests that children notice good air quality and it shapes how comfortable and happy they are indoors at your child care setting [4].

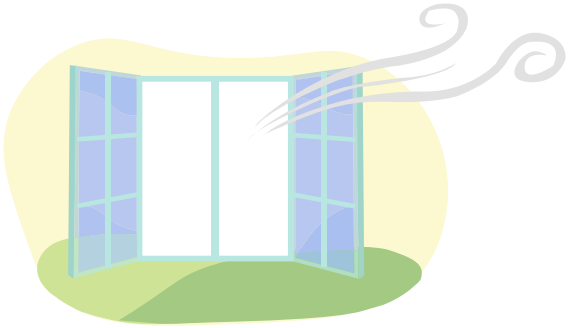
famly

How do you know if you've got good ventilation in your classroom?

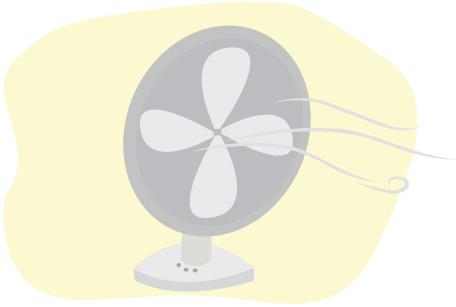
The more people you have in any given space, the more ventilation you'll need to keep replacing the stale and (potentially) germy air with the fresh stuff. Researchers suggest that it's best to **replace the air in a room between six and ten times per hour** [5]. Obviously, we can't see the germs hanging in the air. But if the air in a room feels stuffy, stale or musty, odds are it's not very well-ventilated.

If you want to get precise, the University of Oregon has developed a tool to help calculate your exact ventilation needs, based on things like the size of your room and the number of occupants. It's an advanced tool, but they've got videos to help you use it.
You can find the Safe Air Spaces Risk Estimator right here [6].

Checklist: 6 steps to more clean air



1. Open up the windows (and doors). This is the first step to more COVID-safe ventilation. If it's cold where you are, layering up your clothes is the best thing you can do.



2. Use fans to start circulating fresh air. Try to think in terms of air intakes and exits. Do you have a place for fresh air to enter your building, and somewhere to vent the old air? Setting up a window fan blowing out of the window is a good way to get that circulation going, and makes sure you're not blowing unclean air back into a room.

3. Set up humidifiers throughout your building. When the air inside has enough moisture, it's harder for virus particles to stay airborne as long. By some metrics, viruses in overly dry air can survive six times as long as those in appropriately humid indoor air [7].

famly.

4. Get some air cleaners in your classrooms. Air purifiers pull air from the room and pass it through a filter that traps pollutants like airborne virus particles. In general, they're most effective when you put them in the middle of the room. You can build your own air cleaner for cheap, too — take a look at the next page to see how. Try to avoid using interior spaces that are hard to ventilate. If possible, it's worth rethinking how you use your interior spaces for the time being.

5. Take things outside. It's safer to shift activities to the spaces where you get the most fresh air. In terms of coronavirus transmission, outside is one of the safest places to be. Not only does the fresh air help whisk away germs, but sunlight may also help destroy the virus when it rests on surfaces [8].

Further reading. Looking for inspiration on outdoor learning? Take a look at the Famly Early Years Blog. We've written about how to do outdoor learning come rain or shine, and have some great ideas for outdoor activities.

6. If you've got any exhaust fans in your kitchen space, keep those on. This is another small way for you to keep sucking the stale air out of your space. If you've got ventilator fans in your bathroom, keep them on too. This works just like the kitchen fans to support good air circulation in your environment.

famly.

Guide on making a cheap DIY air purifier

Air purifiers are a great defense against the coronavirus. They work by pulling air through a filter that traps airborne particles (like viruses), blowing clean air out the ot her end. You can buy air purifiers at home electronics stores, although they don't come cheap.

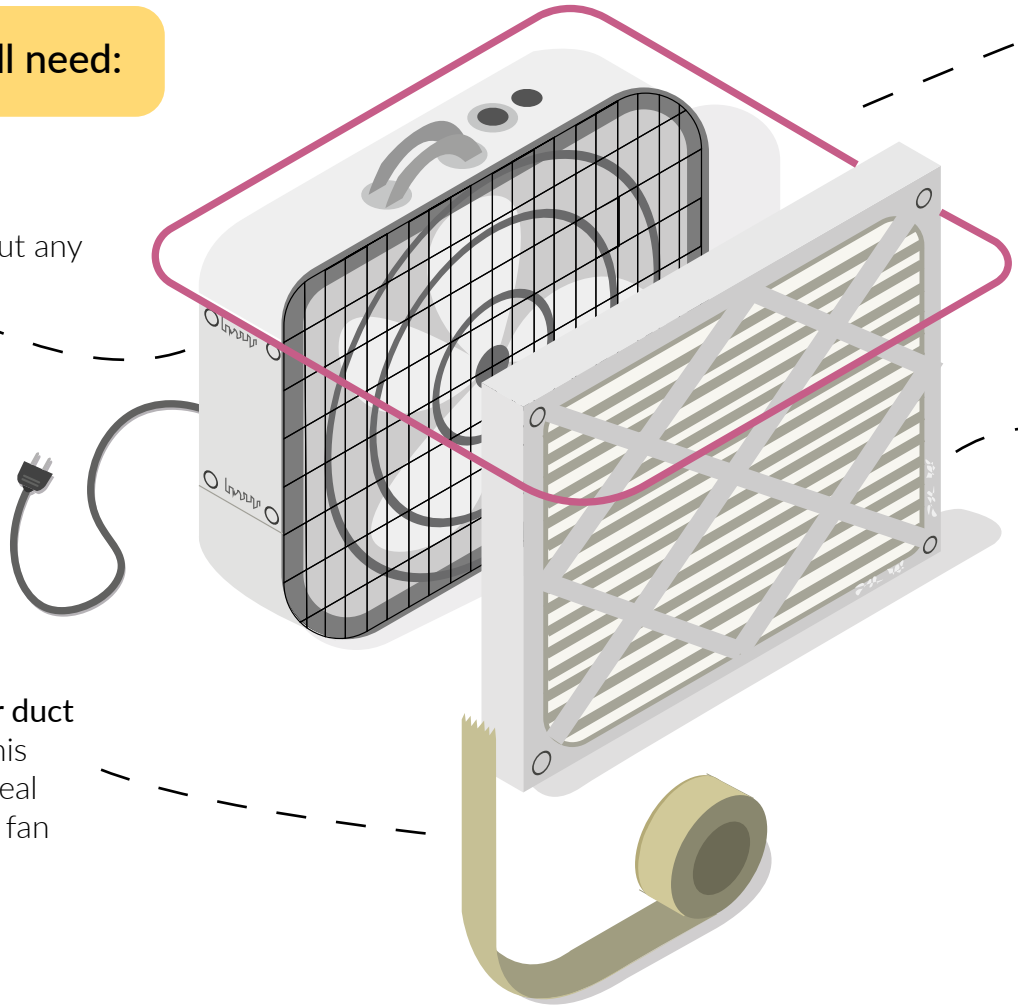
But if you've got $30 (£22) and half an hour, you can build a simple air purifier at home — and it can remove between 50 and 80% of airborne particulates from your room [9].

Here's how you can build your own air purifiers for your child care setting.

What you'll need:

A **square box fan**.
You can get these at just about any home supply store.

Rubber bands, string or tape. This is for holding the box fan and filter together.



Strips of foam, or duct tape. You'll use this to make a good seal between the box fan and air filter.

A **MERV 13 air filter**. These are meant as replacement air filters for home furnaces. MERV 13 is a rating, indicating the size of particles this filter is designed to capture.

famly.

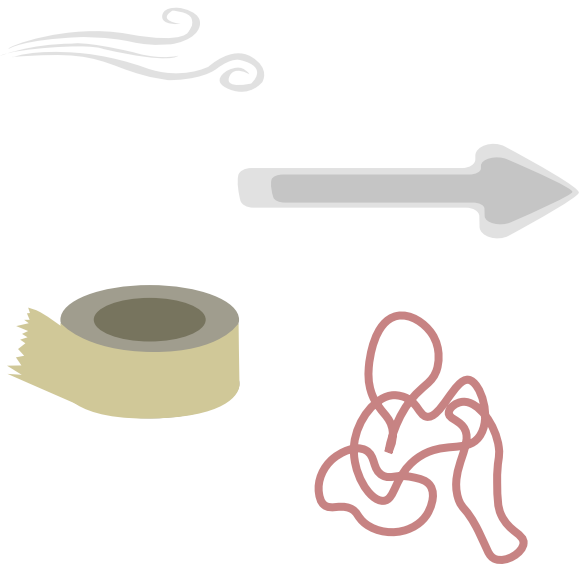
How you build your own air purifier:

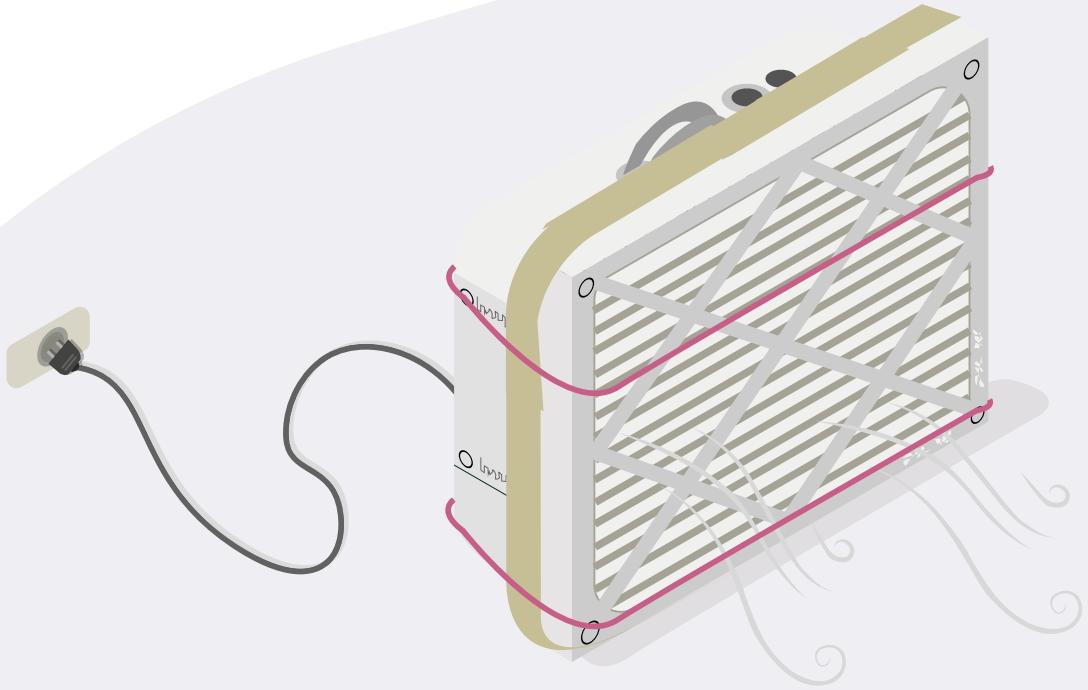
1. Position the MERV 13 air filter on the “blowing out” side of the box fan (not the “sucking in” side).

2. The MERV 13 filter will have an arrow to indicate the direction of air flow — make sure that matches with the fan. Make sure no air is escaping between the fan and the filter.

3. Either place strips of foam around the edge of the fan where it meets your air filter, or use duct tape to seal those edges off. You want to make sure no air is escaping between the fan and the filter.

4. Finally, use string, tape or rubber bands to ensure your air filter is fastened securely to the fan.





How to get the most out of your air purifier

An air purifier like this will work best when you put it in the middle of a room, away from the walls. This ensures that you’re drawing air evenly from all directions, rather than only pulling and purifying air from a certain part of the room.
This style of homemade air purifier has been around before the pandemic, when people used it to cut down on airborne allergens. It’s still not quite as good as that pricey professional unit, but it’s cheap and easy to make. Again, this shouldn’t replace all your other COVID-19 precautions — it should add to them. Right now, you deserve every tool in the toolbox when it comes to keeping yourself and your children safe.

famly.

Additional Resources

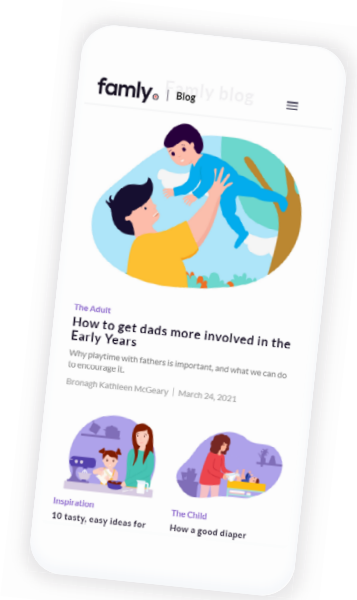
Down below, you'll find a **list of all the resources** we used when putting this guide together, in case you'd like to see where all this information is coming from.

1: WHO: Transmission of SARS-CoV-2
2: Ventilation in day-care centres and sick leave among nursery children
3: Do classroom ventilation rates in California elementary schools influence standardized test scores?
4: How do children perceive indoor air quality (IAQ) at school?
5. The Conversation: How to use ventilation and air filtration to prevent the spread of coronavirus indoors
6. SafeAirSpaces Covid-19 Aerosol Relative Risk Estimator
7. Bloomberg: To Make a Building Healthier, Stop Sanitizing Everything
8. Simulated Sunlight Rapidly Inactivates SARS-CoV-2 on Surfaces
9. Wired: Could a Janky, Jury-Rigged Air Purifier Help Fight Covid-19?

How you can keep learning

Want to learn more? Check out the Famly Early Years Blog. Our team of reporters is covering how child care is responding to the pandemic, and exploring big ideas in child development that will stick with us once all this is over.

If you'd like, we can send the best stories straight to your inbox twice a month. Just **subscribe to our newsletter by scanning this QR-code**. Or just click here.



Now's not the time for extra headaches. Famly helps you focus on the children, not the paperwork.

Head to famly.co/demo to see **how a little bit of software can** make your day a lot easier.

famly.