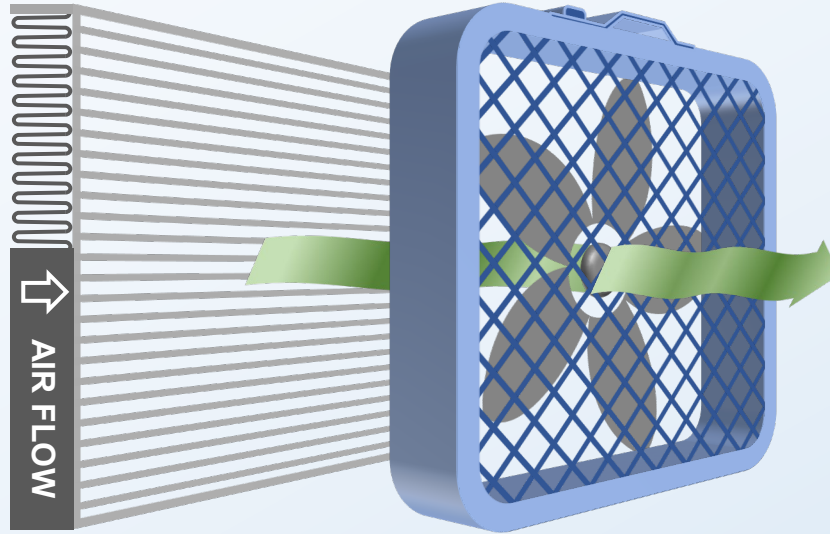


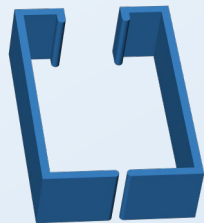
# DIY Air Cleaner to Reduce Wildfire Smoke Indoors: Basic Design

## Materials



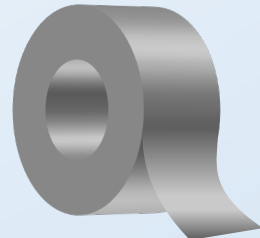
**20" X 20" X 1" or 4" air filter**  
Suggested rating: MERV 13

**20" X 20" box fan**  
Only use certified fans with UL or ETL marking (2012 model or newer)



**Clamps**

*or*



**Duct Tape**

*or*



**Bungee Cords**

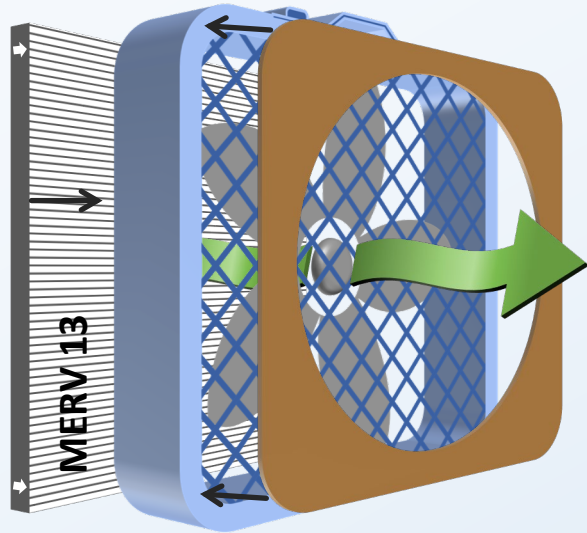
## Assembly

1. Attach the air filter to the back of the box fan using either clamps, duct tape or bungee cords.
2. Check the filter for the direction of the air flow (marked on the side of the filter).
3. Replace filters when dirty.

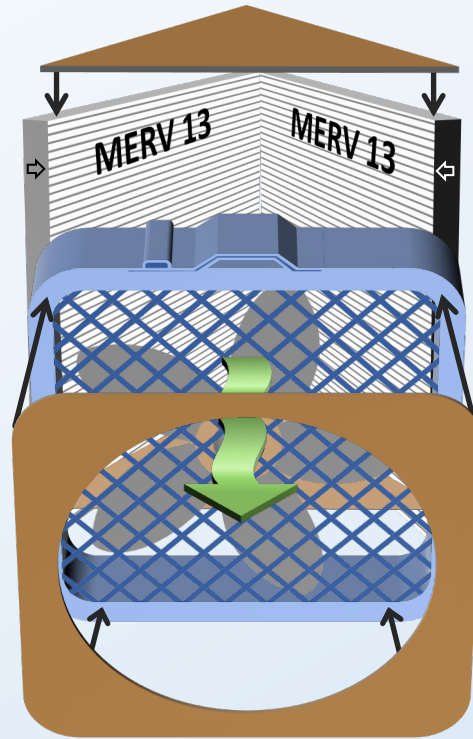
Learn about box fan safety tips:

<https://www.epa.gov/air-research/research-diy-air-cleaners-reduce-wildfire-smoke-indoors#FAQ>

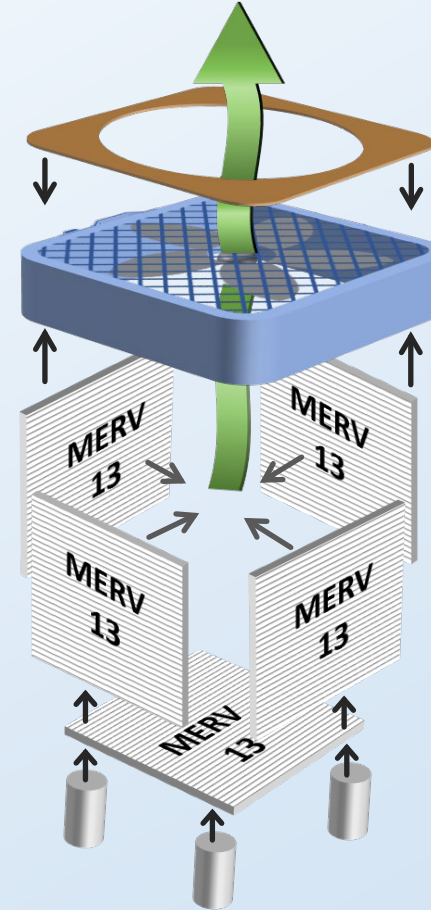
# DIY Air Cleaner Designs: Beyond the Basic



**Good**



**Better**



**Best**

## Basic Supplies:

- 20" x 20" box fan
- 20" x 20" x 1" or 4" MERV 13 air filter
- 20" x 20" cardboard shroud (cutout the size of the fan blades)
- Clamps, duct tape, or bungee cords

## Additional Supplies:

- Two - MERV 13 air filters
- Triangle cardboard cutout for base on top

## Additional Supplies:

- Four or five - MERV 13 air filters
- If using five filter design, use leg supports (e.g., blocks) to allow airflow through bottom

## Ways to Improve Effectiveness:

- Add a cardboard shroud (no-cost improvement)
- Use thicker filters (4" rather than 1" MERV 13 filters)
- Use multiple filters (2-5 filter designs)

## Key Reminders:

- Only use certified fans with UL or ETL marking (2012 model or newer)
- Keep extra filters on hand
- Replace filters when dirty