

Air Cleaning Allies Activity Book



Meet the Air Cleaning Allies!

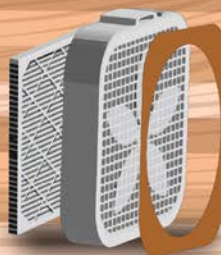
We're here to help you learn how to keep the air in your home clean.

An ally is a friend who is there to support you and help you to achieve your goals!

Hi, I'm Merv
the air filter!

I'm Aerie, the
air cleaner!

And I'm DJ, the
do-it-yourself
air cleaner!



Air filters and air cleaners can help keep the air in your home clean.
As air passes through them, the filters capture small particles of
dust and debris, making the air cleaner.

How Do Particles Get Into the Air?

There are many sources of particle pollution indoors.

Why Is Particle Pollution Important?

Keeping levels of particle pollution low helps keep the air in your home healthier to breathe, especially if you have asthma or allergies.



Can you find the common sources of indoor particle pollution?



Candles



Cleaning Supplies



Cat



Cooking



Mold



Dog



Printer



Outdoor Air



Fireplace



Smoking and Vaping

How Can We Promote Healthy Indoor Air?

Do you know 3 ways to make your indoor air healthier?

1. Reduce Sources of Indoor Particles

The best way to keep the air in your home free of particles is to remove or reduce what makes them!



2. Bring in Fresh Air and Send Out Dirty Air

On days when the weather and air quality are good, open windows and use fans to bring in fresh outdoor air.

Open windows and use fans when you do things like cook or take a shower to clear out particles and other pollutants from your home.



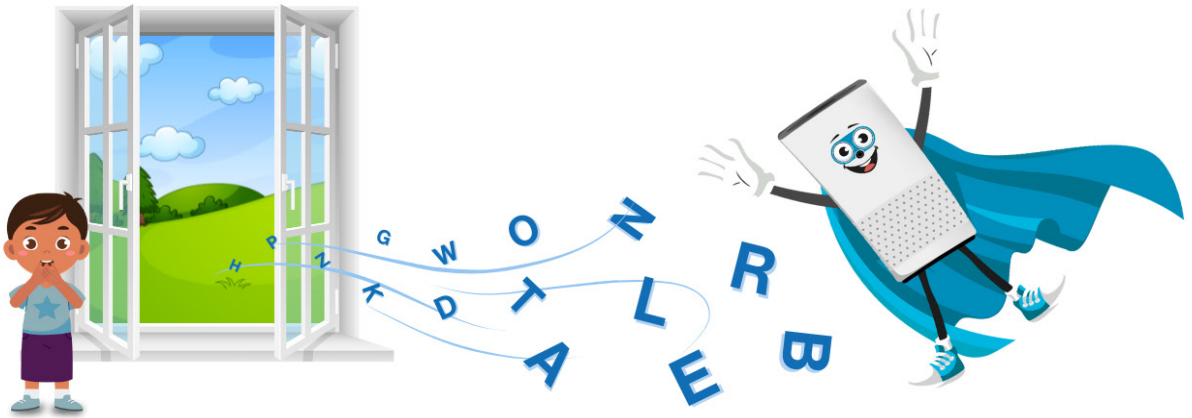
3. Filter Particles From the Air

Use filters in home cooling and heating systems and air cleaners to take particles out of the air.



The Fresh Outdoor Air Scrambled the Letters!

Help Aerie unscramble the words about air cleaning.



IRA PLUINOLTO

FLERIT

ARI NCLAERE

RICTEPAL

DINORO RAI

KMSOE

EALYHTH

TREBHAE

WORD BANK

Air Pollution

Healthy

Smoke

Air Cleaner

Particle

Filter

Indoor Air

Breathe

The Air Cleaning Allies Offer Their Help!

Hello, my name is Riley.



Hi! I'm Tracy.



And I'm Jordan.



Riley has trouble breathing in the house because particles in the air trigger his asthma.

Oh no! Dust can trigger allergies and asthma!

Let's find some ways to make the air in here cleaner.

Where do we start?

I wish we had some help.

Let's ask the Air Cleaning Allies for help!

Would you like to learn about air cleaning and how it helps to keep the air indoors healthy?

You can count on us!

We can help!

Yes, please!

Are you ready for an adventure?

Great! Let's learn how air cleaners and filters work.

Let's go!

Do You Know How Filters Work?

Filters are usually found in your home's cooling or heating system and in air cleaners. They can help keep the air clean.



Merv and the kids shrink down to explore an air filter and learn how it works.

To see how a filter works, we are going to have to get much smaller!

How did the filter catch all of these particles?

Whoa – look!

The filter has small fibers that catch particles in the air. The same way a spider catches a fly in its web.

MERV 8

MERV 13

Some particles can make it through, so it's important to find the right filter that can catch smaller particles. The higher a filter's "MERV" rating, the better that filter is at catching smaller particles.

Filters in portable air cleaners also catch particles to clean the air in a room. It is important to pick one that is the right size for the room. Learn more on page 8.

Now Aerie and the kids continue their adventure by exploring how an air cleaner uses filters.

Let's go inside for a closer look!

Woohoo!

How cool!

A filter in an air cleaner works the same way, by catching small particles from the air.

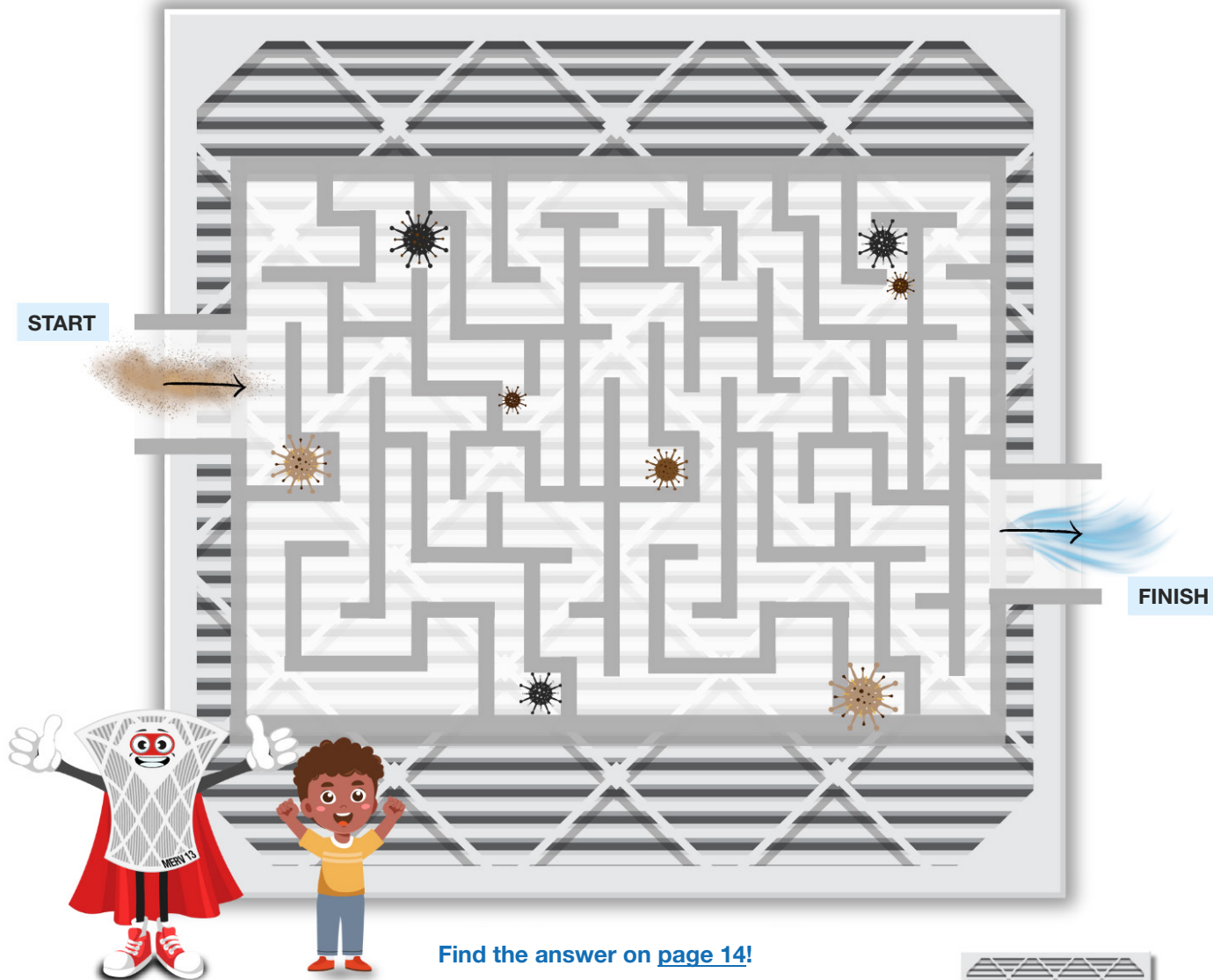
Whoa!

Help the Air Make Its Way Through a Filter!

Only particles get stuck...

**DID YOU
KNOW?**

Filters are rated based on how well they work, just like your grades in school. A higher MERV rating means the filter catches more particles. **Ask your parent or guardian if they know the rating of the filter in your home's heating or cooling system, if you have one.**

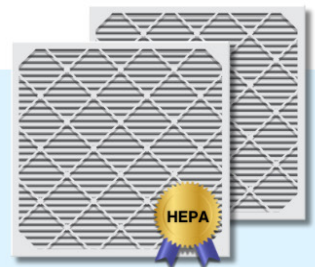


Find the answer on [page 14!](#)

WHAT ARE HEPA FILTERS?

HEPA filters are the best at catching small particles

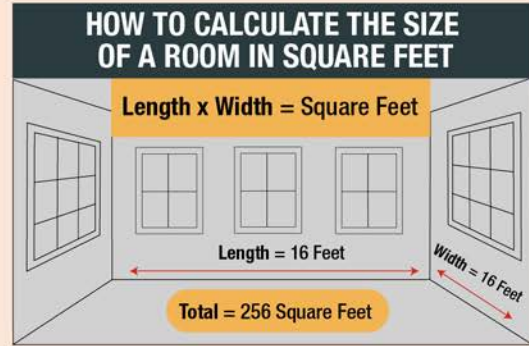
Many portable air cleaners have HEPA filters.



Is My Portable Air Cleaner the Right Size?



Help Jordan, Riley, and Tracy find the air cleaner that is the right size for their room.



Draw a line from each kid to the air cleaner with the correct room size.



200 square feet



150 square feet



180 square feet

My room is 10 feet long and 15 feet wide.



My room is 10 feet long and 18 feet wide.



My room is 10 feet long and 20 feet wide.



Preparing for Smoke Emergencies

Do-it-yourself air cleaners can come in handy in an emergency when you can't get portable air cleaners.

Get help from an adult to make your own do-it-yourself air cleaner.

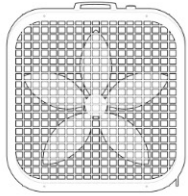


DJ teaches the kids about do-it-yourself air cleaners and how to build one during an emergency.



Let's Color!

Color in each of the materials to make a **DIY** air cleaner.



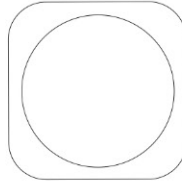
1 Box Fan



4 MERV 13
Filters



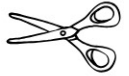
Duct Tape



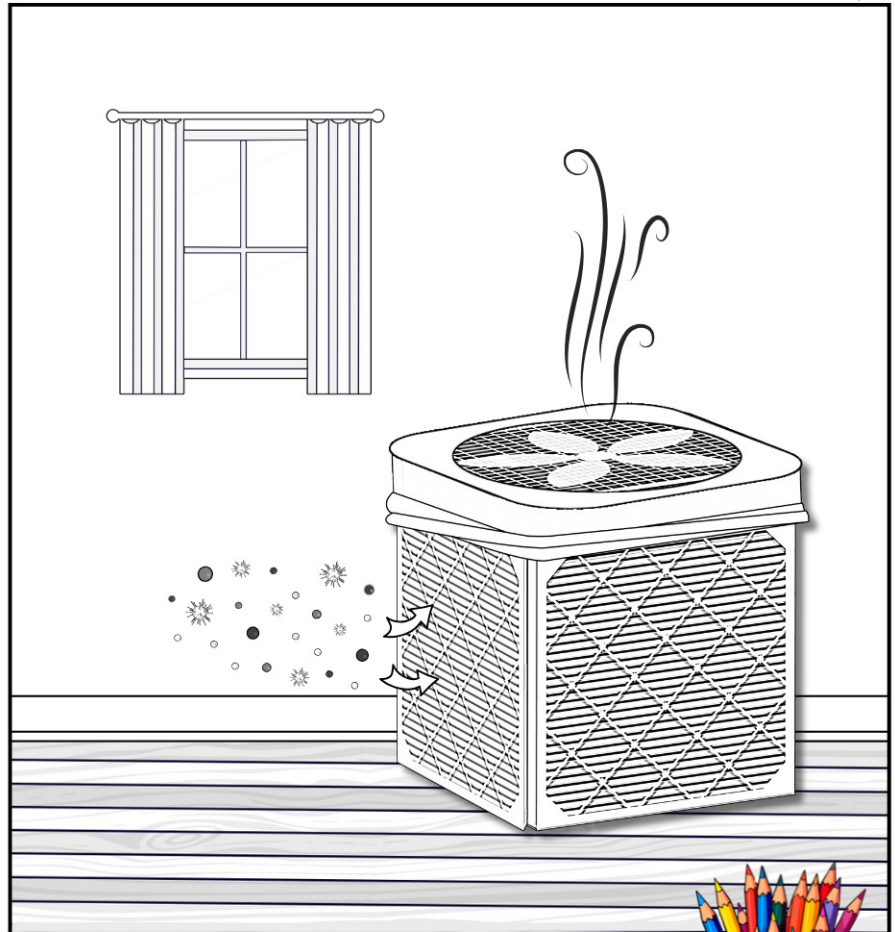
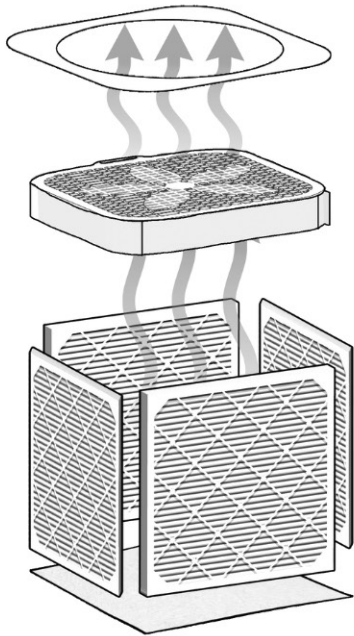
1 Cardboard
Shroud



1 Cardboard
Square



Scissors



Learn how to build your own!





What Did You Learn?

Complete the **crossword puzzle** to show how much you learned. Look back in the booklet to find the answers, if needed.

**WORD
BANK**



Cleaning

Indoors

Filters

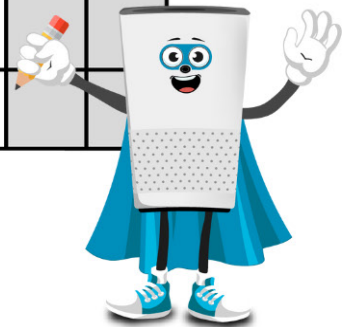
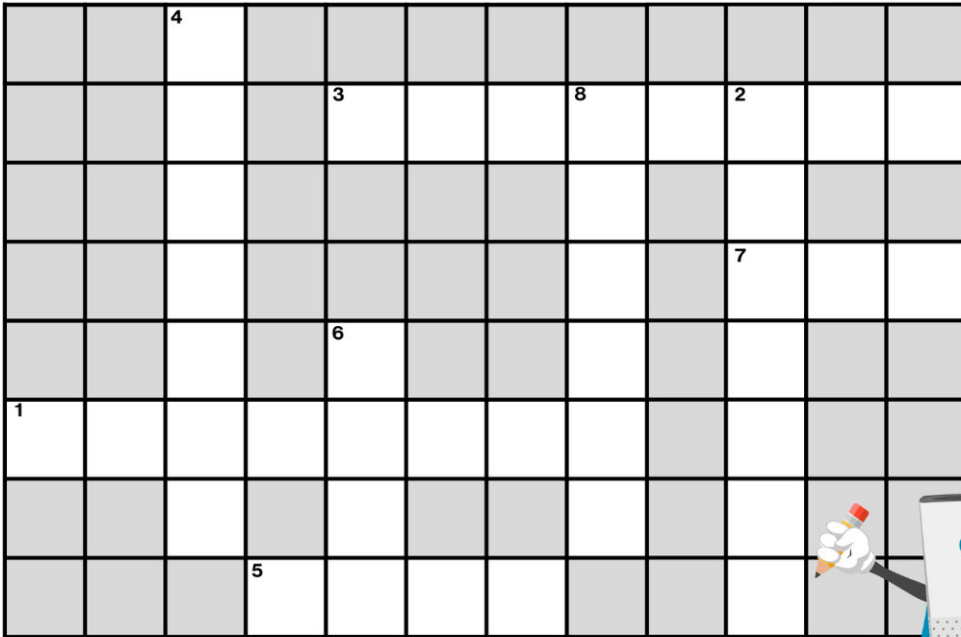
Allies

Particle

MERV

Size

DIY



ACROSS

1. _____ pollution can come from outdoor and indoor sources.
3. Using air _____ devices can help improve your indoor air.
5. The higher the _____ rating of your filter, the better it works at capturing particles.
7. During an emergency, if you can't find a portable air cleaner, you can make a _____ air cleaner.

DOWN

2. It's important to keep the air _____ healthy to breathe.
4. _____ can capture particles from the air.
6. Use a portable air cleaner that is the right _____ for your space.
8. The Air Cleaning _____ can help you learn about ways to keep the air in your home clean.

With the help of the Air Cleaning Allies, the kids cleaned their indoor air. Now everyone can breathe better!



Glossary

air cleaning: Air filters and air cleaners pull air through a filter and capture small particles of dust and debris, to make the air passing through much cleaner.

ally: A friend who is there to support you and help you to achieve your goals.

filter: A device that collects small particles of dust and debris from the air passing through it.

MERV: A Minimum Efficiency Reporting Value, or MERV, reports a filter's ability to capture particles.

particle: Particles can include dust, dirt, soot, or smoke that are in the air. Some particles are large or dark enough to be seen with the naked eye, while others are too small to see without a microscope.



Resources for Kids, Parents and Guardians, and Educators

Ask a parent, guardian, or teacher to help you scan the QR codes below to access the resources.

The EPA's Indoor Air Quality Homepage

www.epa.gov/indoor-air-quality-iaq



Guide to Air Cleaners in the Home

www.epa.gov/indoor-air-quality-iaq/guide-air-cleaners-home



Build a Do-It-Yourself Air Cleaner

www.epa.gov/emergencies-iaq/diy-air-cleaners

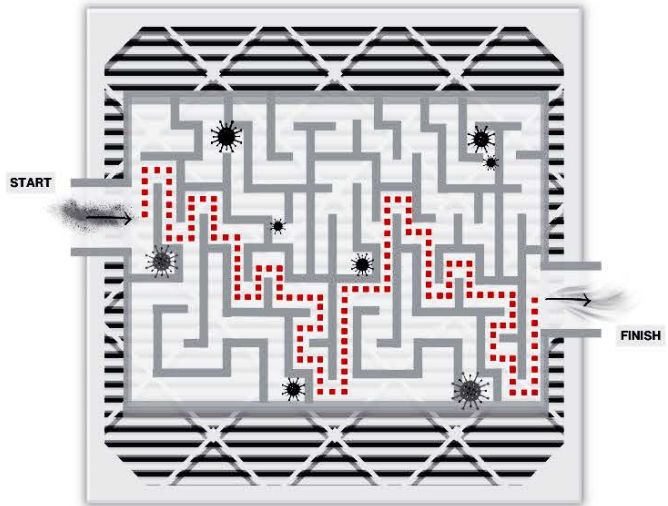


Answer Key

Can You Find?



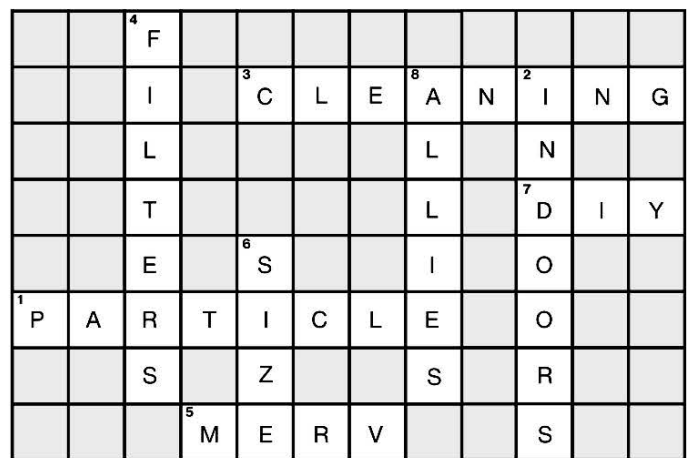
Filter Maze



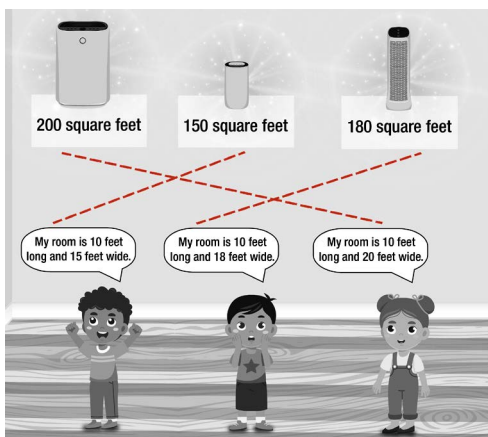
Word Scramble

1. Air Pollution
2. Filter
3. Air Cleaner
4. Particle
5. Indoor Air
6. Smoke
7. Healthy
8. Breathe

Crossword Puzzle



Right Size Air Cleaner



ACROSS

1. Particle
3. Cleaning
5. MERV
7. DIY

DOWN

2. Indoors
4. Filters
6. Size
8. Allies

Learn About Particle Pollution in Your Home!

This activity book raises awareness of the common sources of particle pollution inside homes and the effective strategies for promoting healthier indoor air.

By teaming up, kids and their parents or guardians can learn about these strategies and why it is important to keep the air indoors healthier to breathe.

This book includes —

- Fascinating illustrations to color.
- Comic strips featuring the Air Cleaning Allies.
- Engaging activities for children ages 7 and up to enjoy.
- Puzzles, word games, activities, and more!

**DISCOVER WHAT YOU CAN DO TO
KEEP THE AIR IN YOUR HOME CLEAN!**

