

# Wind Catcher



## What Is this Activity?

**What's in your air?** You and your child wear a sticky badge around your city or town to capture dust, soot, pollen, seeds ... and what else?



**Big Science Ideas:** Wind blows lots of things from one place to another. So the air often has things—including harmful things—that can affect plants and animals.

## GO OUTSIDE

### What You'll Need:

Calm, sunny day (rain and wind wipe away air pollutants); white plastic lids (or white index cards or small white paper plates); petroleum jelly (or clear tape); string or ribbon; scissors to cut string; sharpened pencil or hole puncher; magnifying lens (optional); video or phone camera (optional)

- 1. Make Wind Catchers (two or more):** Poke a hole near the top of a lid or index card with the pencil and tie a string through it. Smear on a thin layer of petroleum jelly. (Don't have any? Use clear tape wrapped in a loop so that a sticky side faces out.)
- 2. Use your Wind Catchers in one or more of the following ways.**  
First, check the weather forecast to avoid rain.
  - Tie one inside your home and one outside, near your home. Collect them after a few days.
  - Tie them where buildings or trees block wind (small courtyards, for example) and where wind blows strongly (near water, in open areas). Collect them after a few days.
  - Wear one like a badge or pin as you walk all over your city or town.
  - Tie one to the handlebar of a bike or to a car and ride around.
  - Where else would you like to hang them?
- 3. Walk around the neighborhood and look for sooty buildings**—ones with a dark layer of grime. (Leave your Wind Catcher on.) **Brainstorm together:** *What parts of the city have the dirtiest air?* (Near factories, where wind is blocked, where traffic is heavy.) Explain that plants can absorb pollution that is harmful to animals. They also give off oxygen for animals to breathe.

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### Topic

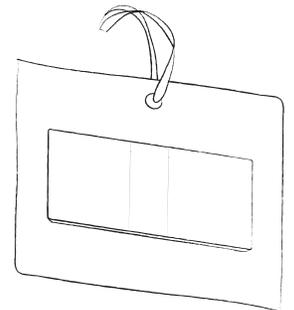
air and atmosphere,  
human impact on the  
environment

### Activity Type

outdoors (calm day  
with no rain or snow, all  
temperatures; sunny  
day for optional step 4)

### Activity Time

5–10 minutes to make  
Wind Catchers, open-  
ended time to use and  
explore them



4. **Optional: If available, climb with your child to a high point or a fenced rooftop overlooking your city.** *Is the sky clear blue from ground to top? Or do you see a low-lying layer of brownish smog (“smoke” and “fog”) over the city? Breathe: Does the air smell fresh or yucky?*

**For older or more mature children:** Challenge them to keep a photo record of the scene by taking one picture at the same time every day, for as many days as they can. They can compare their visual evidence with the “Forecast: Pollen and Smog” data described below.

5. **Wonder aloud:** *What did the Wind Catchers catch? Which ones are dirtiest? (A magnifying lens is helpful but not necessary to see the particles.) (Tips: Plant pollen is yellow, brown, or white. Soot and dust are dark. Also look for fluffy seeds that drift in the wind.) Discuss: What makes city air dirty? (Exhaust from cars, burning oil or gas to heat buildings, factory smokestacks, etc.)*
6. **Try this activity at different times of the year.** Do the results change?

## EXPLORE SOME MORE

### Forecast: Pollen and Smog?

Many people are allergic to pollen, a powder that plants give off. All people are harmed by smog, a pollutant that contains a gas called ozone. Ozone damages lungs, causing breathing problems and coughing.

What are the pollen and smog levels in your city? Wind Catchers can give you a general idea. But if you want to know more, check the local weather forecast for your city’s Air Quality Index and pollen counts each day. Track them over a week and take a walk each day to see if you can notice differences—“good” days versus “bad” days.

### The Manta Ray Mystery

Wind can move things like flags, leaves, and trash. Watch this short PLUM LANDING video in which Cooper and Clem investigate a very windy city. **Ask:** *You can’t see wind, so how can you tell when it moves?*

### Outdoor Family Fun with Plum App

This app gets families outdoors exploring the world. Every day, the app offers five outdoor missions to get everyone thinking and talking about nature and the science that’s all around us.

**VISIT [pbskids.org/plumlanding](http://pbskids.org/plumlanding) to find apps, videos, games and more activities.**



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