



Air Quality Actions

When asked what types of activities produce air pollution, many children will give the response of factories and cars, but they themselves don't work in factories or drive cars. This activity will show kids how the choices they make every day impact local air quality.

Supplies:

- Food coloring
- Clear cups
- Large clear jug/pitcher
- Water
- Pollution key (below)

Step 1: Talk about Air Pollution

Talk to the children about air pollution. What is it? Where does it come from? For more info check out our air quality 101 fact sheets on the resources page of our website.

Step 2: Set Up

Fill the clear container with water. Fill half way if only 1 or 2 people are doing the activity. Have a clear cup filled half way full of water for each person doing the activity. It's more fun with more people, so you should do it too!

Step 3: The Activity

Air quality is hard to visualize, so the water will represent air quality. The jug represents the air of your home or neighborhood. Right now, the water is clear and so the air is clean.

- Give each person their own cup. Tell them that their cup represents the air around them.
- Tell them that you will be asking them a series of questions about activities that they take part in. For each question, they should think about it in terms of a normal day, from the time they wake up to the time they go to sleep.
- Go through each of the questions on the pollution key. Each time the person says they do the activity, add one drop of the corresponding color to their cup. This drop of color represents the air pollution created from doing that activity.

Step 4: Discussion

After you have gone through the entire key, have everyone look at their "polluted" cups. Do kids contribute to air pollution more than they originally thought?

Have them dump their cups back into the jug that represents their neighborhood. How do their actions affect others around them? What are some steps they could take to minimize their air pollution output?

This activity is adapted from our Clean Air Kits, and was paid for through Allegheny County Clean Air Funds.



Air Pollution Dispersion Key & Questions

Blue—pollutants from consumer products and paints

Green—pollutants from lawn, garden, and construction machinery

Red—pollutants from cars and trucks

Yellow—pollutants from power plants and industrial processes

Did you/ will you shower today?

One drop of Yellow—Pollution emitted by combustion used to heat the water for the shower.

Remember, electric water heaters often depend on combustion too, because a lot of power plants burn fossil fuels to generate electricity.

Does your shower last 10 minutes or longer? If so add another drop of Yellow for the same reason.

Did you use shampoo? Conditioner? Soap? One drop of Blue—Volatile Organic Compounds (VOCs) emitted by soap, shampoo, and fingernail polish

Did you/ will you use products in an aerosol can, which include perfume, cologne, hairspray, or spray on deodorant? One drop of Blue for each product they use — These also create VOCs

Did you/will you use these appliances: (go one by one)

Air Conditioner/Heater: One drop of Yellow—Pollution emitted by combustion used to generate electricity.

Washing Machine: One drop of Blue; One drop of Yellow if new appliance, Two drops if old appliance

Dryer: One drop of Blue

Did you/will you ride in a car or bus today? One drop of Red for bus or carpool—Pollution emitted by the engine in your school bus or car. **Two drops of Red for car**— Because without carpooling, you make more pollution per person

Did you/ will you eat food packaged in a plastic bottle or can? One drop of Yellow—Pollution emitted by manufacturing process

Will you use disposable trays or utensils? One drop of Yellow—for the same reason

Does your food come from outside of PA? examples: oranges, cashews, chocolate, coffee
One drop of Red—pollutants from cars and trucks transporting it

Will you eat meat? One drop of Green—pollutants from lawn and gardening machinery

General electricity use:

TV

Computer or Tablet

Cell Phone

Game System (Xbox, PlayStation, etc.)

One drop of Yellow for each of the above