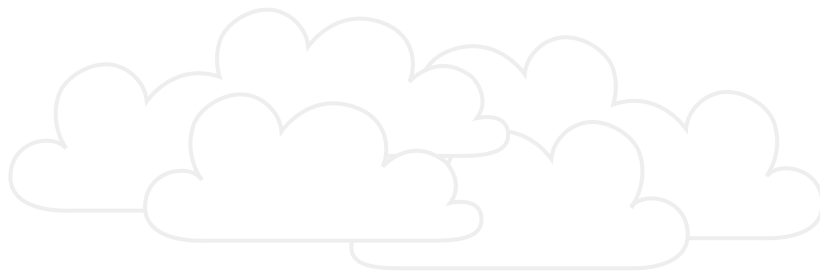


NOX, VOCs & COUGHS – OH MY!

Welcome to NOX, VOCs & Coughs – Oh My!, environmental education brought to you by the Houston-Galveston Area Council's Clean Air Action Program. This week, you will meet some interesting characters who will help teach you about ground-level ozone.

What is ground-level ozone? We know you want to know, so let's get on with the show...





NOX, VOCs & COUGHS – OH MY!

Whiff Wrap-Up–Day 1

Boy, Pesky and Odious are definitely a pair. They think they are tight, but we know they are not.

So, what did we learn? Ground Level Ozone – also known as tropospheric ozone, is a pollutant that can make it hard for you to breathe. It forms on warm, sunny days, reaching the most dangerous levels in the afternoon and early evening. You and your community can help keep ozone levels low by doing simple everyday things to reduce pollution. The people, plants, and animals who need clean air to breathe will appreciate your help to keep ground-level ozone under control.

Who has a question for me?





NOX, VOCs & COUGHS – OH MY!

Dear Brownie Friend,

I want to tell you about a cool contest – the Clean Air Action Poster Contest. In a week, show us some ways that you can help make a difference in our air quality. One Brownie and one Girl Scout will be chosen as the contest winners. IT COULD BE YOU!

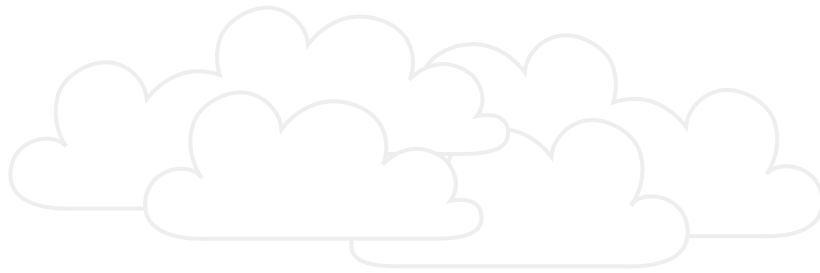
So, on the sheet attached, draw your best picture showing us some of the ways you can help make our air better.

GOOD LUCK!!

Your Friend,

Whiff



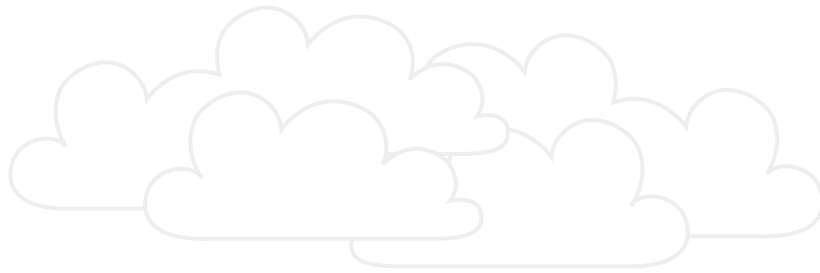


NOX, VOCs & COUGHS – OH MY!

Did you know recycling helps keep our air clean? Well it does. Let's go on a scavenger hunt to find recyclable items. Can you find them all?

- Newspaper
- Glass
- Milk carton or Jug
- Soda can
- Plastic soda bottle
- Telephone book
- Magazine
- Aluminum foil
- Paper bag
- Plastic grocery bag





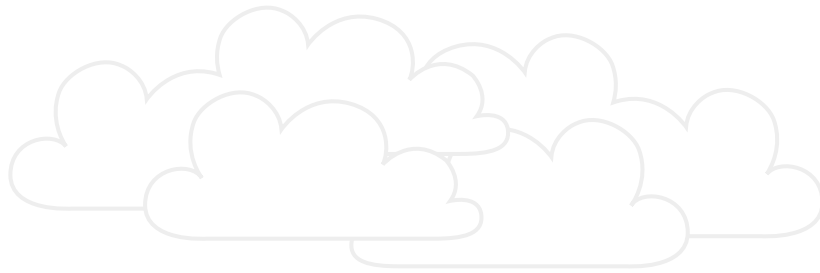
Name _____

Date _____

Troop _____

We know you will work hard to do your share for cleaner air. We want you to let others know too what you will do to help knock out the bad pollution floating around in the air we breathe. Below, write a letter, poem, or cheer to send to Mr. Leonard Spearman at the Texas Natural Resource Conservation Commission, telling him how you plan on helping him and the community keep our air clean.





Brownie Clean Air Tips

What You Can Do:

Reduce The Electricity You Use

When you use less electricity you help reduce pollution. So help by doing a couple of these things:

- Open the curtains or blinds in your home to let the daylight in.
- Use lower-watt and high efficiency light bulbs.
- Set the temperature in your refrigerator between 38 and 42 degrees.
- Make sure that when your family buys things like: refrigerators, air conditioners, or washers, that they are energy efficient.



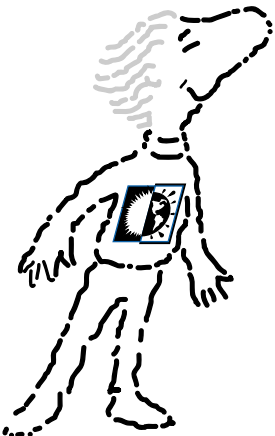


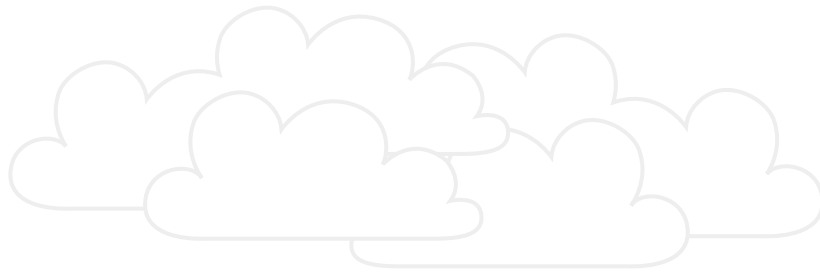
Reduce The Energy Used To Heat Your Home

- Keep the thermostat as low as you can in the winter.
- Weather-strip windows and doors in the cold weather.
- Tell your parents about thermostats with timers that turn down the heat automatically when no one is home or at night.

Saving Water Also Saves Energy

- Wash only full loads in dish and clothes washers.
- Water lawns only during the cooler part of the day.
- Use a water displacement device in the toilet tank.
- Install a low-flow shower head.
- Use a broom rather than a hose to clean driveway, patios and walkways.





Try Alternative Transportation

- Take public transportation when possible.
- Walk or ride a bike for short trips.
- When your family buys a car, ask your parents to buy the most energy-efficient and least polluting model.

Don't Let Your Family Buy Toxic Or Hazardous Products

- Look for non-toxic products to clean your house instead.
- Recycle used automotive fluids.
- Use water-based rather than oil-based paints.





Create Less Trash!

- Reuse items by giving them away or repairing them.
- Recycle newspaper, glass, aluminum, tin cans, plastic soda bottles, milk cartons, telephone books and corrugated cardboard.
- Save all the leaves and lawn trimmings and make a compost heap that can be used to fertilize your garden!





Thank you for choosing NOX, VOCs & COUGHS—OH MY! We hope you had fun. Will you take a few minutes and answer these questions for Whiff? He really appreciates it.

1. I liked learning about the environment

yes no

2. I liked learning about ground-level ozone

yes no

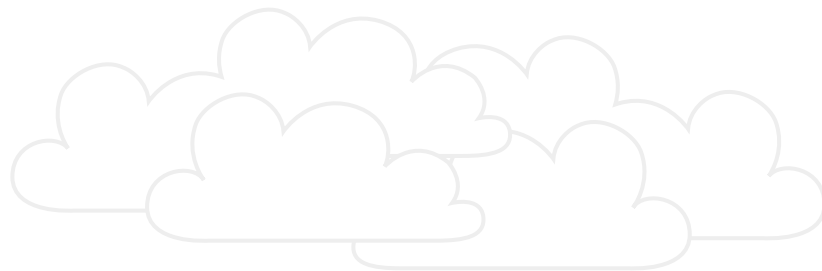
3. I will tell my friends and family about what I learned

yes no

4. I want to learn more about keeping our air clean

yes no





Ozone Action Days

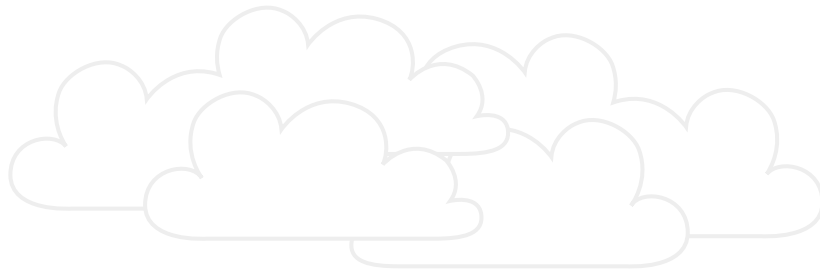
A Special Alert For People With Asthma And Other Respiratory Problems

We hear a lot about depletion of the ozone layer in the stratosphere. This kind of ozone protects us from harmful ultraviolet radiation. Stratospheric ozone is good, but ground-level ozone is harmful. When people think of ground-level ozone, they usually picture a thick layer of smog over Los Angeles. They don't usually think of a Houston summer day—hazy blue sky, sunny, and hot.

But people who live in Houston and surrounding counties are affected by a severe air pollution problem—ozone. It affects outlying suburbs and rural areas as well as the big cities.

Ozone Action Days will be called when weather forecasters predict days that are conducive to ozone formation. The area's industries and individual residents will be asked to voluntarily reduce emissions that cause ozone pollution.

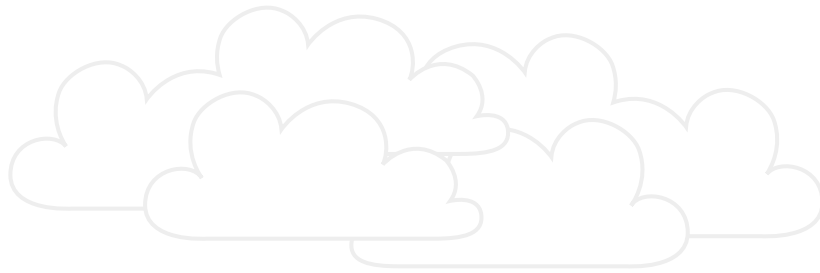




Although ozone cannot be seen or tasted, it can irritate lungs and make breathing difficult. The urban haze that we call smog contains pollutants that react to form ozone.

Most of the pollutants that form ozone come from cars. Large factories account for another portion of the emissions. Small businesses such as printing plants, service stations, and auto body shops, and people using lawnmowers, paints, and cleaning solvents account for another portion of the emissions.





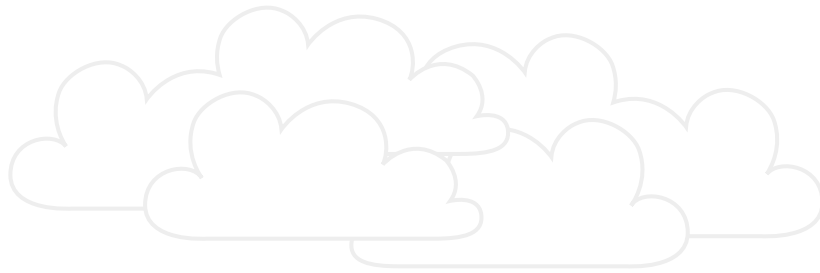
Exercise and Ozone

Exercise makes us even more vulnerable to lung damage from ozone. We breathe more air during exercise or strenuous work. We draw air more deep into our lungs. And when we exercise heavily, we breathe mostly through the mouth, bypassing the body's first line of defense against pollution - the nose.

People who are already especially vulnerable to ozone are even more vulnerable when exercising or engaging in strenuous work. These people include: children, asthmatics, those with heart and lung disease and the elderly.

Children are especially vulnerable to ozone pollution during exercise because they breathe more and faster than adults; are more likely to play outdoors during midday when ozone levels are highest; and their lungs are still developing.





Exposure to ozone pollution can be minimized by exercising before 11:00 a.m. after 8 p.m. Since sunlight and time are necessary for ozone formation, the highest levels typically occur during the afternoon.

Bicycle transportation is a great alternative to driving a car. The environment benefits because there are zero emissions from bicycles. The rider benefits from increased exercise. However, for all of the reasons just mentioned, the benefits to riders can be significantly reduced during the afternoon on days when the ozone levels are high.





NOX, VOCs & COUGHS—OH MY!

Ok, now it is time to have some real fun. On the next page you will see drawings of those nasty pollution gremlins. Pick out the one you dislike the most and see if you can make a clay figure that looks just like him!

Since we have gotten to know one another soooo well, you may want to make me, Whiff. You can find a drawing of me just about anywhere on the information you have gotten in class all week. You can even find me in the bottom left corner of this page. Take a look. Did you find me? Good. Go ahead and give it your best shot. I am sure you will do a great job!

