

Suspect a natural gas leak?

First, move your feet!

Then call when you're down the street.

# O-O-O-O- Baby, It's a Gas!

You can learn a lot about natural gas by trying these experiments. The materials you need are basically the same for both experiments. And, you probably have all the stuff around your house.

**Kids,**

*be sure to ask your parents before you try this experiment and let them help you with the details too!*



## The Bionic-Biogas Experiment

You probably read in the "About Natural Gas" section about biogas, a natural gas resource that is being developed for the future. In a nutshell, biogas comes from landfills and is the result of trash (food, wood, farm waste) that breaks down, releasing gas as it decays. Energy engineers are busy learning how to take this biogas and use it as natural gas fuel. Now, here's a fun way you can make some biogas of your own.

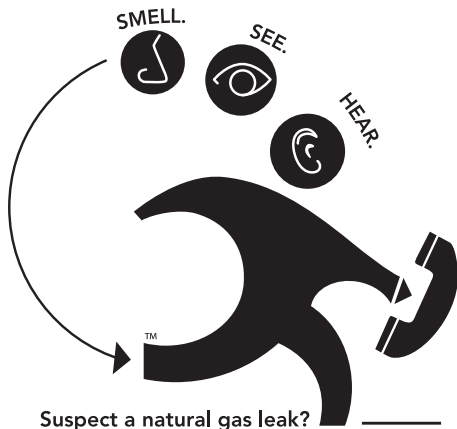
### Directions:

1. Make a "yummy" mixture of the scraps and soil by putting both of them into the jar and stirring with the spoon.
2. Stretch the neck of the balloon over the mouth of the jar and fix it tightly with the rubber band. (Ask your parent for help!)
3. Now, watch and wait. Put the jar someplace warm, like near a window, for about a week. As the scraps break down with the soil, they will release gas. Then, your balloon will gradually fill with biogas. TAH-DAH!

### Materials needed:

- Empty jar
- Balloon (don't blow it up!)
- Rubber band
- Spoon 
- Raw vegetable scraps (like carrots, apple or potato peels, broccoli stems, lettuce or greens) 
- 1/4 cup of soil





Suspect a natural gas leak?

First, move your feet!

Then call when you're down the street.

# O-O-O-O- Baby, It's a Gas!

You can learn a lot about natural gas by trying these experiments. The materials you need are basically the same for both experiments. And, you probably have all the stuff around your house.

**Kids,**

*be sure to ask your parents before you try this experiment and let them help you with the details too!*

## The Fizzy-Fun-Gas Experiment

When natural gas is transferred through pipelines, it is pressurized so it takes up as little space as possible. Gas molecules take up more space than molecules for solids or liquids because they are farther apart from each other. You can see how gas can take up lots of space with this cool experiment.

### Directions:

1. Using the funnel, fill the balloon, taking care not to stretch it, with baking soda. Don't fill the neck part of the balloon, just the body. (A parent can help you with this!)
2. Wipe off the funnel very well and use it to fill the bottle about one-fourth full with vinegar.
3. Now, carefully stretch the neck of the balloon over the bottle opening. Let the balloon hang down the side of the bottle while you do this, so none of the baking soda spills into the bottle. Make sure the balloon is snugly in place.
4. WOOHOO, get ready! Lift the balloon quickly so the soda falls into the bottle. As the soda (a base substance) reacts with the vinegar (an acid), bubbles filled with carbon dioxide will appear. When the bubbles pop, they release gas into the air. All that gas takes up so much space that it has nowhere to go but up and into the balloon.

### Materials needed:

- Empty bottle
- Balloon (don't blow it up!)
- Funnel
- Baking soda
- Vinegar

