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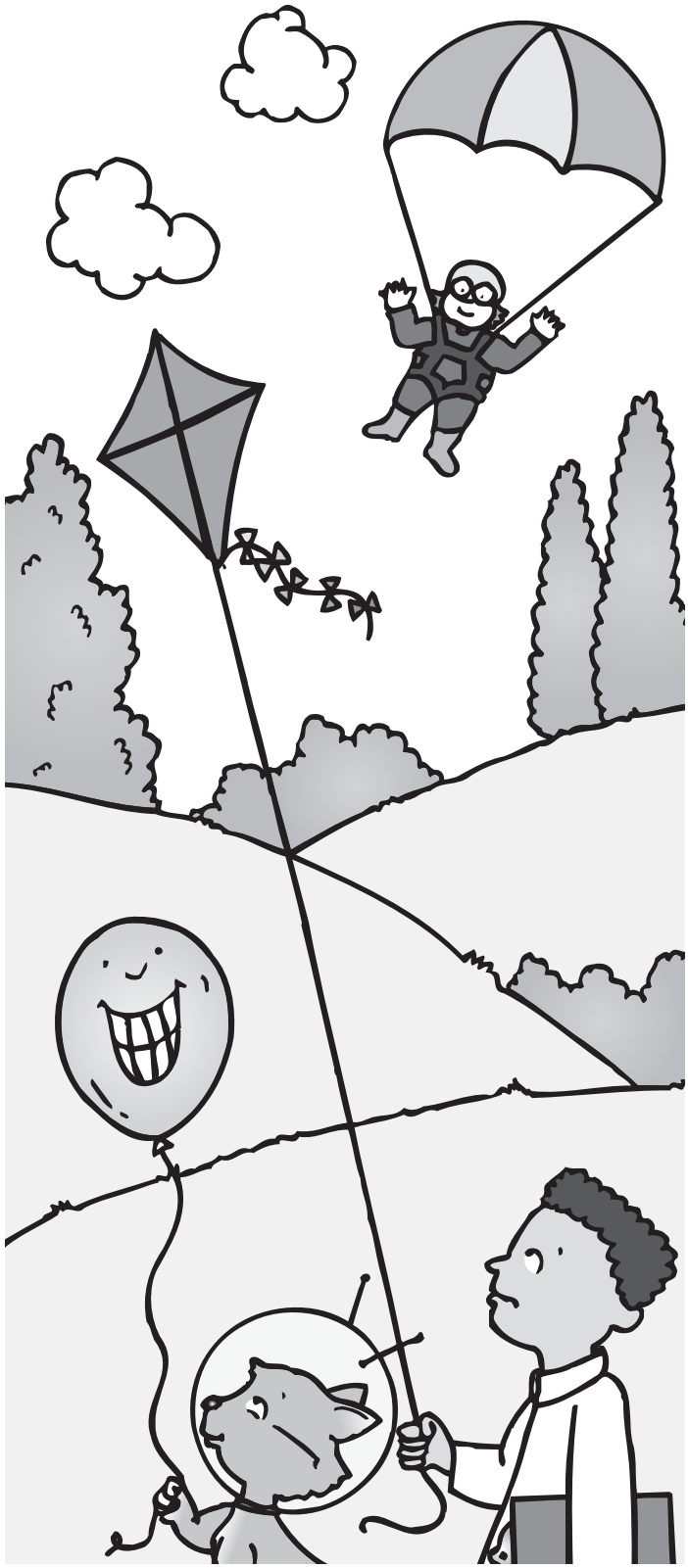
Science Action Labs



What Is in Our Air?

Air Science 1

Air Is Transparent

You can see right through air because it is normally transparent. No one could see you if you were transparent.

Sometimes air is not transparent. When air is dirty we call it **smog**. Smog can hurt our lungs and eyes.

Sometimes air has a lot of water particles in it. Water particles can make the air less transparent. This is called **fog**. A fog is really a cloud close to Earth.

What Is in the Air?

Air is a mixture of many gasses. Most of our air is made up of a gas called **nitrogen**. The rest of the air is mainly **oxygen**.

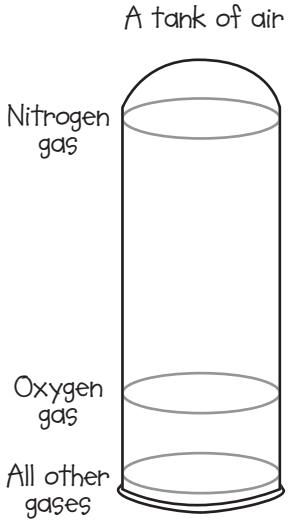
Air has very small amounts of other gasses. Can you pronounce their names?

argon **neon** **krypton** **xenon** **helium** **carbon dioxide**

Argon is used in light bulbs to keep them clear. Neon gives color to electric signs. Helium in balloons makes them light. Superman depended on krypton.

Nitrogen and the other gasses go in and out of our lungs. They don't harm or help us. Oxygen is the only gas our bodies need.

Water, as gas, is also found in the air. On some days the air can be dry. Very wet air days are called **humid**. We feel damp and uncomfortable on humid days.



Name _____

What Is in Our Air?

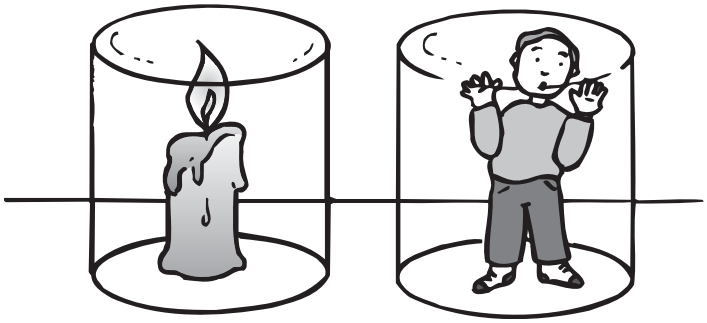
All About Oxygen

The oxygen in the air is vital to our life. We need oxygen to combine with our food. Oxygen and digested food meet in the cells of our bodies and give us energy to move. Oxygen also helps warms our bodies.

Experiment

Let's do an *imaginary* experiment. Imagine that you placed jars over a lighted candle and a person. What would happen to the candle? What would happen to the person? What gas in the air do they both need?

Caution!
Have an adult light the candles and handle the jars.

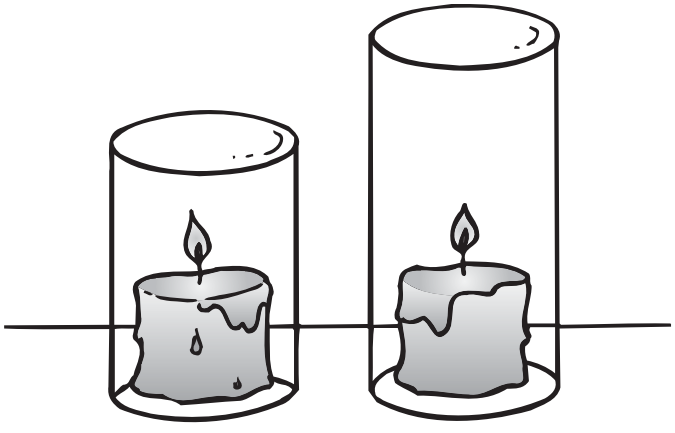


Now let's do a real oxygen experiment.

1. Use two candles that are the same size.
2. Light the candles at the same time.
3. Place a small jar over one candle.
4. Place a large jar over the other candle.

Which candle went out first?

What important gas did the larger jar have more of?



Name _____

What Is in Our Air?

Burning up Oxygen

You have learned that air has oxygen. This experiment will burn up the oxygen in a jar. It will tell us what part of the air is oxygen.

Experiment

1. Fill a shallow bowl half full of water.
2. Place a sturdy candle in the center of the bowl of water.
3. Have an adult light the candle and place the jar over it.

Caution! *Have an adult light the candle and handle the jars.*

What happened?

Can you guess how far the water went up the jar? Circle the right answer.

A. $^1/_{10}$ B. $^1/_5$ C. $^1/_2$ D. All the way